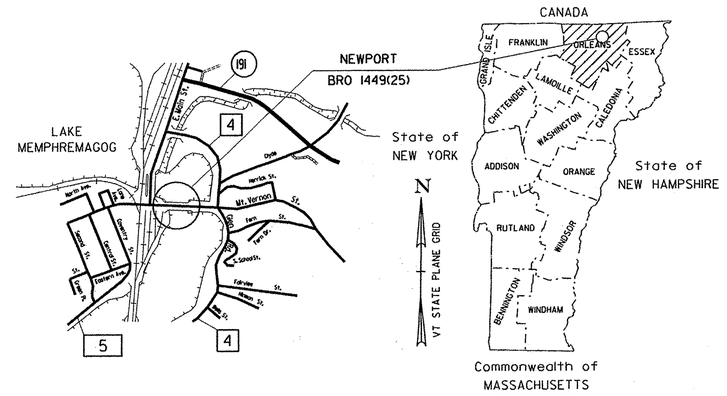
SEE SHEET 2
FOR INDEX OF SHEETS

STATE OF VERMONT
AGENCY OF TRANSPORTATION



RECORD PLANS	
CONTRACTOR:	REED & REED, INC. - WOOLWICH, ME
RESIDENT ENGINEER:	CHRIS CRAIG
CONSTRUCTION BEGAN:	MARCH 5, 2012
CONSTRUCTION COMPLETE:	OCTOBER 8, 2013
RECORD PLANS BY:	CHRIS CRAIG & JENNA HYDE

I HEREBY CERTIFY THAT ALL THE CONSTUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN.

BY _____ RESIDENT ENGINEER

DATE 7-3-14

NOTE: Any further information concerning final quantities, amounts or other details relative to this project may be found at Central Files in the electronic archives.

PROPOSED IMPROVEMENT

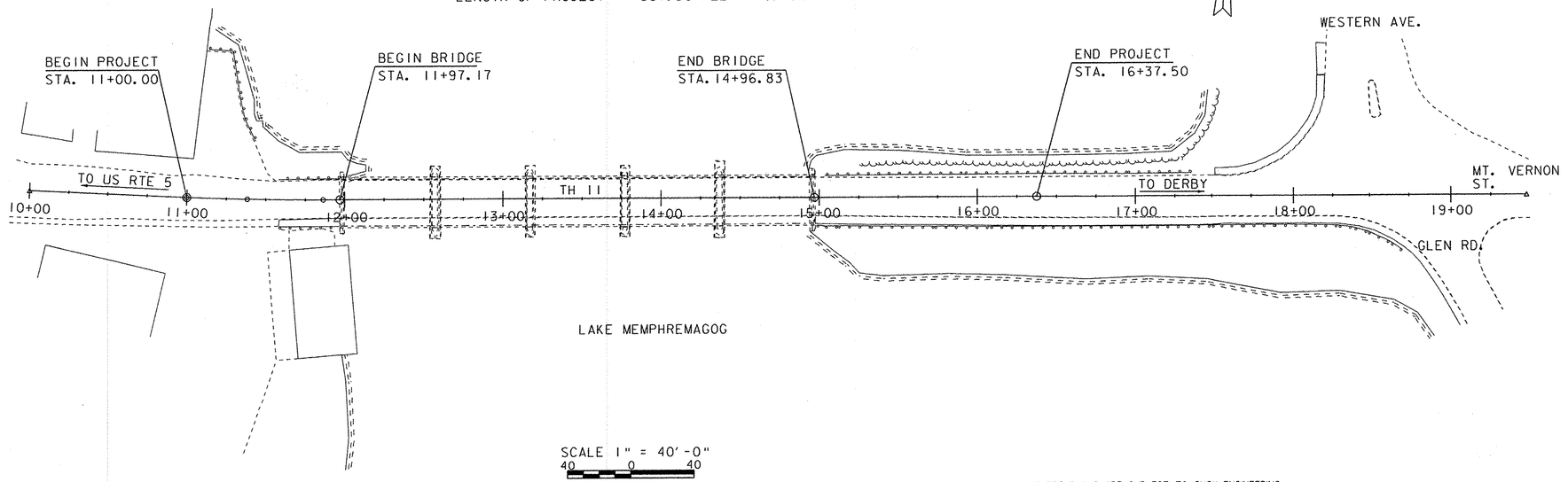
BRIDGE PROJECT
NEWPORT CITY
COUNTY OF ORLEANS

RAILROAD SQUARE, TH 11 (CLASS 2) MAJOR COLLECTOR, BRIDGE NO. 9

PROJECT LOCATION: BEGINNING APPROXIMATELY 0.05 MILES EAST OF THE INTERSECTION OF T.H. 11 (RAILROAD SQUARE) AND US ROUTE 5 (EAST MAIN STREET) AND PROCEEDING EASTERLY 0.102 MILES.

PROJECT DESCRIPTION: REMOVAL OF EXISTING STRUCTURE, CONSTRUCTION OF NEW 3 SPAN CONTINUOUS COMPOSITE STEEL GIRDER SUPERSTRUCTURE, NEW ABUTMENTS AND PIERS, AND RELATED ROADWAY WORK.

LENGTH OF STRUCTURE: 299.66 FEET = 0.06 MILES
LENGTH OF ROADWAY: 237.84 FEET = 0.045 MILES
LENGTH OF PROJECT: 537.50 FEET = 0.102 MILES



SCALE 1" = 40'-0"
40 0 40

QUALITY ASSURANCE PROGRAM: LEVEL 2

CONVENTIONAL SYMBOLS

COUNTY LINE
TOWN LINE
LIMITS OF ACCESS
POINT OF ACCESS
FENCE LINE
STONE WALL
TRAVELED WAY
GUARD RAIL
RAILROAD
SURVEY LINE
CULVERT
POWER POLE
TELEPHONE POLE
TREES
CONTROL OF ACCESS
PROPERTY LINE
R.O.W. TAKING LINE
SLOPE RIGHTS
TOP OF CUT
TOE OF SLOPE

SURVEYED BY :	R. GILMAN
SURVEYED DATE :	12/07/2000
DATUM	
VERTICAL	NAVD 88
HORIZONTAL	NAD 83 (96)

THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE DIRECTOR OF PROGRAM DEVELOPMENT.

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2006, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JUNE 15, 2006 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

DIRECTOR OF PROGRAM DEVELOPMENT
APPROVED _____ DATE 11-15-11

PROJECT MANAGER : C. CARLSON

PROJECT NAME : NEWPORT CITY
PROJECT NUMBER : BRO 1449(25)

SHEET 1 OF 75 SHEETS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

PRELIMINARY INFORMATION SHEET (BRIDGE)

Version 11.08.15

LRFD

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C-3B	SIDEWALK RAMPS AND MEDIAN ISLANDS	03-10-2008
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D-11	STEEL OR IRON GRATES& COVERS (TYPE A)	06-01-1994
E-100	CONSTRUCTION APPROACH SIGNS	01-02-2004
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E-101	CONSTRUCTION SIGN DETAILS	05-30-2003
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E-107A	BREAKAWAY BARRICADE DETAILS	06-08-2009
E-108	CONSTRUCTION ZONE LONGITUDINAL DROP OFFS	06-08-2009
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E-121	STANDARD SIGN PLACEMENT - CONVENTIONAL ROAD	08-08-1995
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E-191	PAVEMENT MARKING DETAILS	02-01-1999
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SD-501.00	CONCRETE DETAILS AND NOTES	7-May-10
SD-502.00	CONCRETE DETAILS AND NOTES	4-Jun-10
SD-516.10	BRIDGE JOINT ASPHALTIC PLUG	7-May-10
SD-601.00	STRUCTURAL STEEL DETAILS & NOTES	4-Jun-10
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RECORD PLANS

RP-1	PLAN AND ELEVATION	1947
RP-2	SUPERSTRUCTURE DETAILS	1947
RP-3	DETAILS OF ABUTMENTS	1947
RP-4	DETAILS OF PIERS	1947

REV.	DESCRIPTION	DATE	REVISION BY
1	UPDATED DRIVING CAPACITY	2/23/2012	DRP

TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	ADTT	
2009	5900	610	71	6.7	430	20 year ESAL for flexible pavement from 2009 to 2029 : 3049000
2029	6500	680	71	10.9	760	40 year ESAL for flexible pavement from 2009 to 2049 : 7590000
						Design Speed: 30 mph

FINAL HYDRAULIC REPORT

HYDROLOGIC DATA

Date: August 2011

DRAINAGE AREA: 311 sq. mi.
CHARACTER OF TERRAIN: Hilly to mountainous
STREAM CHARACTERISTICS: The bridge is over the South Bay of Lake Memphremagog
NATURE OF STREAMBED: Silt, sand and gravel

PEAK FLOW DATA

Q 2.33 =	5,000 cfs	Q 50 =	12,500 cfs
Q 10 =	9,000 cfs	Q 100 =	14,000 cfs
Q 25 =	11,000 cfs	Q 500 =	17,000 cfs

DATE OF FLOOD OF RECORD: The maximum water level since 1931 was on April 20, 1933.
ESTIMATED DISCHARGE: Unknown
WATER SURFACE ELEV.: 685.5' as recorded at the USGS gage that was on this bridge.
NATURAL STREAM VELOCITY: @ Q25 = 1.0 fps
ICE CONDITIONS: Sheet ice. Design thickness = 36" at Q25, strength = 100 psi.
DEBRIS: Slight
DOES THE STREAM REACH MAXIMUM HIGHWATER ELEV. RAPIDLY? No
IS ORDINARY RISE RAPID? No
IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? Yes
IF YES, DESCRIBE: Water levels at the site are controlled by Lake Memphremagog

WATERSHED STORAGE: 10% HEADWATERS: X
UNIFORM:
IMMEDIATELY ABOVE SITE: X

EXISTING STRUCTURE INFORMATION

STRUCTURE TYPE: 5-span steel beam bridge with concrete deck
YEAR BUILT: 1947
CLEAR SPAN(NORMAL TO STREAM): 5 spans at 56' each = 280' total
VERTICAL CLEARANCE ABOVE STREAMBED: 30'
WATERWAY OF FULL OPENING: 6,730 sq. ft.
DISPOSITION OF STRUCTURE: Remove and replace
TYPE OF MATERIAL UNDER SUBSTRUCTURE: Silt, sand and gravel

WATER SURFACE ELEVATIONS AT:

Q2.33 =	683.5'	VELOCITY =	1.0 fps
Q10 =	684.5'	"	1.7 fps
Q25 =	685.0'	"	2.0 fps
Q50 =	685.3'	"	2.2 fps
Q100 =	685.6'	"	2.6 fps

LONG TERM STREAMBED CHANGES: Based on record plans, there appears to be several feet of scour through the center spans and some aggradation in the eastern spans.

IS THE ROADWAY OVERTOPPED BELOW Q100: No
FREQUENCY: Above Q100
RELIEF ELEVATION: 686.4', at about station 10+90 on the western approach
DISCHARGE OVER ROAD @Q100: None

UPSTREAM STRUCTURE

TOWN: Newport City — DISTANCE: 1,600'
HIGHWAY #: Railway — STRUCTURE #:
CLEAR SPAN: approximately 405' — CLEAR HEIGHT:
YEAR BUILT: — FULL WATERWAY:
STRUCTURE TYPE: Multi-span bridge

DOWNSTREAM STRUCTURE

TOWN: Newport City — DISTANCE: 500'
HIGHWAY #: U.S. 5 — STRUCTURE #: ##
CLEAR SPAN: 8 spans at 37' each = 236' total — CLEAR HEIGHT: 30'
YEAR BUILT: Built in 1927, rehabilitated in 1981 — FULL WATERWAY: 7,000 sq. ft.
STRUCTURE TYPE: 8-span steel beam bridge with concrete deck

LRFR LOAD RATING FACTORS

LOADING LEVELS	TRUCK						
	H-20	HL-93	3S2	6AXLE	3A STR	4A STR.	5A SEMI
TONNAGE	20	36	36	66	30	34.5	38
INVENTORY	2.49	1.07					
POSTING							
OPERATING	3.22	1.38	2.63	1.66	2.37	2.13	
COMMENTS:							

PILE DRIVING AND TESTING REQUIREMENTS

1. NOMINAL PILE DRIVING CAPACITY — Pndr: 312.00 KIP
2. PILE TEST RESISTANCE FACTOR — ϕ: 0.65
3. MAXIMUM PILE TIP ELEVATION — 544.00 FT
4. ONE DYNAMIC PILE LOAD TEST SHALL BE CONDUCTED AT EACH ABUTMENT.

PROPOSED STRUCTURE

STRUCTURE TYPE: 3-span continuous steel girder bridge with concrete deck

CLEAR SPAN(NORMAL TO STREAM): 84' + 114' + 84' = 282' Total
VERTICAL CLEARANCE ABOVE STREAMBED: 31'
WATERWAY OF FULL OPENING: 6060 sq. ft.

WATER SURFACE ELEVATIONS AT:

Q2.33 =	683.5'	VELOCITY=	0.9 fps
Q10 =	684.5'	"	1.6 fps
Q25 =	685.0'	"	1.9 fps
Q50 =	685.3'	"	2.2 fps
Q100 =	685.6'	"	2.4 fps

IS THE ROADWAY OVERTOPPED BELOW Q100: No
FREQUENCY: Above Q100
RELIEF ELEVATION: 686.4', at about station 10+75 on the western approach
DISCHARGE OVER ROAD @Q100: None

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: Approx. 686.2', Low end 684.4'
VERTICAL CLEARANCE: @ Q25 = 1.2' average, Low end submerged 0.6'

SCOUR: No contraction scour, 6' of pier scour at Q100 and 7' of pier scour at Q500

REQUIRED CHANNEL PROTECTION: Stone fill, Type IV

PERMIT INFORMATION

AVERAGE DAILY FLOW:	650 cfs	DEPTH OR ELEVATION:
ORDINARY LOW WATER:	280 cfs	Elevation 681.0'
ORDINARY HIGH WATER:	2150 cfs	Elevation 682.7' - per USACOE

TEMPORARY BRIDGE REQUIREMENTS

STRUCTURE TYPE: None required.
CLEAR SPAN (NORMAL TO STREAM):
VERTICAL CLEARANCE ABOVE STREAMBED:
WATERWAY AREA OF FULL OPENING:

ADDITIONAL INFORMATION

TRAFFIC MAINTENANCE NOTES

1. MAINTAIN TRAFFIC ON AN OFF SITE DETOUR.
2. TRAFFIC SIGNALS ARE NOT NECESSARY.
3. SIDEWALKS ARE NOT NECESSARY

DESIGN VALUES

1. DESIGN LIVE LOAD		HL-93
2. FUTURE PAVEMENT	dp:	3.0 INCH
3. ABUTMENT BEARING TO BEARING LENGTH (THREE SPANS) (89.00 - 120.00 - 89.00) FT	L:	298.00 FT
4. MIN. MID-SPAN POS. CAMBER @ RELEASE (PRESTRESSED UNITS)	Δ:	---
5. PRESTRESSING STRAND	fy:	---
6. PRESTRESSED CONCRETE STRENGTH	f'c:	---
7. PRESTRESSED CONCRETE RELEASE STRENGTH	f'ci:	---
8. CONCRETE, HIGH PERFORMANCE CLASS AA	f'c:	---
9. CONCRETE, HIGH PERFORMANCE CLASS A, LOW CEMENT	f'c:	4.0 KSI
10. CONCRETE, HIGH PERFORMANCE CLASS B	f'c:	3.5 KSI
11. CONCRETE, CLASS C	f'c:	---
12. REINFORCING STEEL	fy:	60 KSI
13. STRUCTURAL STEEL AASHTO M270	fy:	50 KSI
14. SOIL UNIT WEIGHT	γ:	0.140 KCF
15. NOMINAL BEARING RESISTANCE OF SOIL	qn:	4.0 KSF
16. SOIL BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	ϕ:	---
17. NOMINAL BEARING RESISTANCE OF ROCK	qn:	10.0 KSF
18. ROCK BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	ϕ:	---
19. NOMINAL AXIAL PILE RESISTANCE	1 qp:	312.0 KIPS
20. PILE YIELD STRENGTH ASTM A572	fy:	50 KSI
21. PILE SIZE		HP 12X 84
22. EST. PILE LENGTH	Lp:	135 FT
23. PILE RESISTANCE FACTOR	ϕ:	---
24. LATERAL PILE DEFLECTION	Δ:	1.35 INCH
25. BASIC WIND SPEED	Vss:	90 MPH
26. MINIMUM GROUND SNOW LOAD	pg:	---
27. SEISMIC DATA PGA: ---	Ss:	---
	S1:	---

PROJECT NAME: NEWPORT CITY
PROJECT NUMBER: BRO 1449(25)

FILE NAME: s96i314_pi_NEW.xls — PLOT DATE: 2/23/2012
PROJECT LEADER: C. CARLSON — DRAWN BY: C. MOONEY
DESIGNED BY: D. PETERSON — CHECKED BY: C. CARLSON
PRELIMINARY INFORMATION SHEET — SHEET 2 OF 75

GENERAL

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO STATE OF VERMONT, AGENCY OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2006, AND ITS LATEST REVISIONS; AND THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 5TH EDITION AND ITS LATEST REVISIONS.

2. ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL, AND ARE GIVEN AT 68 DEGREES FAHRENHEIT, UNLESS NOTED OTHERWISE.

EARTHWORK

3. ITEM 529.15 "REMOVAL OF STRUCTURE" SHALL INCLUDE:

   - THE REMOVAL OF THE EXISTING SUPERSTRUCTURE AND ANY PORTION OF THE EXISTING ABUTMENTS AND PIERS NOT REMOVED UNDER STRUCTURE EXCAVATION OR UNCLASSIFIED CHANNEL EXCAVATION.
   - THE CONCRETE PIER CAP SHALL BE REMOVED AND TIMBER PILES PULLED OUT COMPLETELY OR CUT OFF AT LAKE BED ELEVATION.
   - THE TIMBER PILES AT THE ABUTMENTS SHALL BE REMOVED IN THEIR ENTIRETY. OTHERWISE, THERE WILL BE CONFLICTS DRIVING IN THE NEW HPILES AND THE EXISTING PILES AT EACH ABUTMENT.

4. THE CONTRACTOR'S ATTENTION IS DIRECTED TO SUBSECTION 301.06 REGARDING THE COMPACTION OF SUBBASE MATERIAL.

5. THE CONTRACTOR MAY SUBSTITUTE SUBBASE OF DENSE GRADED CRUSHED STONE FOR THE SAND BORROW SHOWN ON THE PLANS. IF PLACEMENT OF SUBBASE IS IN LIEU OF SAND BORROW, PLACE A GEOTEXTILE MEETING THE REQUIREMENTS OF SECTION 649 FOR "GEOTEXTILE FOR ROAD BED SEPARATOR" BETWEEN THE SUBGRADE AND THE SUBBASE MATERIAL. ANY SUBSTITUTED MATERIAL WILL BE PAID UNDER ITEM 203.31, "SAND BORROW". ALL COSTS ASSOCIATED WITH THE INSTALLATION OF THE GEOTEXTILE FOR ROADBED SEPARATOR SHALL BE INCIDENTAL TO ITEM 203.31, "SAND BORROW".

6. ABUTMENT STONE FILL: PLACE STONE FILL UNDER THE BRIDGE BEFORE SETTING THE STRUCTURAL STEEL.

CONCRETE

7. ITEM 514.10, "WATER REPELLENT, SILANE", SHALL BE APPLIED TO ALL EXPOSED CONCRETE ON THE BRIDGE SUPERSTRUCTURE AND SUBSTRUCTURE, WITH THE EXCEPTION OF THE BOTTOM OF THE DECK BETWEEN THE DRIP NOTCHES.

8. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1 INCH BY 1 INCH, UNLESS OTHERWISE NOTED. A ½ INCH RADIUS SHALL BE USED ON THE TOP INSIDE CORNER OF THE CURBS.

9. JOINTS AND SCORE MARKS IN CONCRETE SHALL BE CONSTRUCTED AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

10. ITEM 900.608, "SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, CLASS A LOW CEMENT)": USE FOR THE DECK, SIDEWALKS, CURB, AND INTEGRAL ABUTMENT CURTAIN WALL AND WING WALLS ABOVE THE PILE CAP CONSTRUCTION JOINT. ALL SUBSTRUCTURE BELOW THE BRIDGE SEATS (EXCLUDING DRILLED SHAFTS) AND THE APPROACH SLAB CONCRETE SHALL BE ITEM 501.34, "CONCRETE, HIGH PERFORMANCE CLASS B."

11. ALL REINFORCING STEEL SHALL BE DETAILED AND FABRICATED USING PROCEDURES AND TOLERANCES IN ACCORDANCE WITH APPLICABLE PUBLICATIONS OF THE "CONCRETE REINFORCING STEEL INSTITUTE".

12. ALL EPOXY REINFORCING STEEL TO BE CUT IN THE FIELD SHALL BE SAW CUT AND THE EXPOSED ENDS TREATED WITH AN APPROVED TWO-PART EPOXY REPAIR MATERIAL.

13. MINIMUM CLEAR COVER FOR REINFORCING STEEL SHALL BE AS FOLLOWS:

ALONG BACK FACES OF WALLS AGAINST EARTH	2 INCHES
ALONG TOP SURFACE OF DECK SLAB:	2.5 INCHES
ALONG BOTTOM SURFACE OF DECK SLAB:	1.5 INCHES
ELSEWHERE UNLESS OTHERWISE INDICATED:	3 INCHES

REINFORCEMENT STEEL PLACEMENT TOLERANCES SHALL BE:

SPACING = +/- 1 INCH
CLEARANCE = +/- ¼ INCH

STRUCTURAL STEEL

14. ALL NEW STRUCTURAL STEEL SHALL CONFORM TO AASHTO M 270M/M 270, GRADE 50. ALL NEW STRUCTURAL STEEL SHALL BE PAINTED BLACK (COLOR CHIP #27038).

15. CHARPY V-NOTCH TEST: TEST STRUCTURAL STEEL MEMBERS DESIGNATED "CVN" IN THE PLANS IN ACCORDANCE WITH SUBSECTION 714.01.

16. BOLTS FOR ALL BOLTED FIELD CONNECTIONS SHALL BE 7/8 INCH DIAMETER HIGH STRENGTH BOLTS IN 15/16 INCH DIAMETER HOLES UNLESS OTHERWISE NOTED.

17. CONNECTIONS NOT SHOWN IN THE PLANS SHALL BE DETAILED BY THE FABRICATOR IN THE FABRICATION DRAWINGS AND SUBMITTED TO THE RESIDENT ENGINEER FOR APPROVAL.

18. AFTER THE SUPERSTRUCTURE STEEL HAS BEEN ERECTED, ELEVATIONS ALONG THE TOP OF GIRDERS SHALL BE TAKEN UNDER DIRECTION OF THE RESIDENT ENGINEER FOR USE IN DETERMINING THE FINAL GRADE AND HAUNCH DEPTHS.

19. FLEMING BRACKETS OR SIMILAR FALSE WORK: SPACE FLEMING BRACKETS OR SIMILAR FALSEWORK AS REQUIRED BY DESIGN WITH A MAXIMUM SPACING OF 4'-0". THE DESIGN OF FALSEWORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

20. HOLES IN WEB: FILL ANY BOLT HOLES IN THE WEBS OF THE BEAMS NOT OTHERWISE FILLED WITH BUTTON HEAD OR HEX HEAD BOLTS MEETING AASHTO M164 TYPE I. TIGHTEN THE BOLTS IN ACCORDANCE WITH SUBSECTION 506.19 OF THE STANDARD SPECIFICATIONS.

H-PILES

21. ITEM 505.265 "STEEL PILING FOR INTEGRAL ABUTMENTS, HP 12 X84". REINFORCE THE DRIVING TIP ACCORDING TO SUBSECTION 505.04(E).

22. ITEM 505.45 "DYNAMIC PILE LOADING TEST". THE NOMINAL AXIAL PILE RESISTANCE FOR EACH PILE IS 401 KIPS.

23. A MINIMUM OF ONE DYNAMIC PILE TEST SHALL BE CONDUCTED PER ABUTMENT. MORE TESTS MAY BE REQUIRED BY THE RESIDENT ENGINEER.

24. FOR ESTIMATING PURPOSES, THE PILE TIP ELEVATIONS WERE ASSUMED AND ARE SHOWN ON THE BORING LOGS. THE ACTUAL IN PLACE LENGTHS MAY VARY.

TRAFFIC CONTROL

25. TRAFFIC SHALL BE MAINTAINED ON A DETOUR AROUND THE BRIDGE DURING CONSTRUCTION. THE TOWN SHALL BE NOTIFIED 2 WEEKS PRIOR TO CLOSURE.

26. THE CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING, INSTALLING AND MAINTAING ALL ON AND OFF PROJECT SIGNS AS DETAILED IN THE DETOUR SIGN PACKAGE AND TRAFFIC CONTRTOL SHEETS INCLUDED IN THE PLANS. THIS WORK WILL BE INCIDENTAL TO ITEM 641.10, "TRAFFIC CONTROL".

27. ANY REMOVAL, COVERING AND/OR RESETTING OF EXISTING TRAFFIC SIGNS, AS DEEMED NECESSARY BY THE RESIDENT ENGINEER, WILL BE INCIDENTAL TO THE ITEM 641.10, "TRAFFIC CONTROL."

28. IF THE CITY OF NEWPORT AND/OR THE RESDIENT ENGINEER DETERMINE ADDITIONAL DETOUR/TRAFFIC SIGNS ARE NECESSARY TO KEEP THE TRAVELING PUBLIC SAFE AND MOVING THROUGHOUT THE DETOUR; THE CONTRACTOR SHALL PROVIDE, INSTALL AND MAINTAIN THOSE ADDITIONAL SIGNS. THIS WORK WILL BE INCIDENTAL TO TIEM 641.10, "TRAFFIC CONTROL".

29. ACCESS TO THE POULIN GRAIN DRIVE, BOND AUTO AND THE CONVENIENT STORE SHALL BE MAINTAINED. IF THE CONTRACTOR NEEDs TO CLOSE THE ACCESSES DUE TO THEIR WORK; THEY MUST CONTACT THE PROPRTY OWNERS AT LEAST ONE (1) WEEK IN ADVANCE OF THAT WORK.

30. THE RESIDENT ENGINEER, POULIN GRAIN MANAGEMENT AND THE CONTRACTOR WILL MEET TO DISCUSS THE GRAIN HAULING OPERATIONS AT POULIN GRAINS. BASED ON THIS DISCUSSION, THE CONTRACTOR WILL PROVIDE FLAGGERS DURING PEAK HOURS OF TRAFFIC TO ASSIST THE POULIN GRAIN TRUCKS EXIT THEIR FACILITY AND ENTER ONTO US 5, THIS WORK WILL BE PAID FOR UNDER THE FLAGGER ITEM.

DRILLED SHAFTS

31. PAYMENT FOR ITEM 900.640 "SPECIAL PROVISION (DRILLED SHAFT IN EARTH) (5 FT TO 5 FT – 6 IN DIA.)" SHALL EXTEND UP TO THE BOTTOM OF THE PIER CAP.

32. SPLICES OF LONGITUDINAL STEEL SHALL BE STAGGERED TO ENSURE MINIMUM SPACING BETWEEN BARS.BARS SHALL NOT BE SPLICED WITHIN +/-10FT OF THE BOTTOM OF THE STEEL CASING.

33. STEEL CASING SHALL BE 35KSI STEEL WITH A MINIMUM THICKNESS OF 0.625 INCH.

34. ALL CONCRETE FOR THE DRILLED SHAFTS SHALL BE SELF-CONSOLIDATING CONCRETE (SCC) AS SPECIFIED IN ITEM 900.640, "SPECIAL PROVISION (DRILLED SHAFT IN EARTH) (5 FT TO 5 FT – 6 IN DIA.)".

35. NO SPLICES SHALL OCCUR IN THE REBAR CAGE FROM ELEVATION 620.00 TO ELEVATION 630.00.

36. THE CONTRACTOR SHALL HIRE A PROFESSIONAL ENGINEER TO DETERMNE HOW MUCH EQUIPMENT (I.E. THE DRILLED SHAFT SUBCONTRACTOR'S EQUIPMENT, MATERIALS ETC.) CAN BE PLACED ON THE EXISTING BRIDGE SPANS DURING THE CONSTRUCTION OF THE SHAFT WITHOUT AFFECTING THE STABILITY OF THE EXISTING BRIDGE DURING THE DRILLING OF THE SHAFTS. THIS WORK SHALL BE INCIDENTAL TO ITEM 900.640, "SPECIAL PROVISION (DRILLED SHAFT IN EARTH) (5 FT TO 5 FT – 6 IN DIA.)".

MISCELLANEOUS

37. PAYMENT FOR CONDUIT ON THE BRIDGE SHALL BE INCLUDED IN THE PRICE FOR ITEM 900.608 "SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, CLASS A LOW CEMENT)".

38. IT IS SUGGESTED THAT THE NEW UTILITY POLES ARE IN PLACE BEFORE THE ENDS OF THE CONDUIT BANK ARE INSTALLED. THE CONTRACTOR SHALL CONTACT THE VERMONT ELECTRIC COOPERATIVE (VEC) TWO (2) WEEKS PRIOR TO NEEDING THE INSTALLATION OF THE NEW UTILITY POLES AT THE TERMINATING ENDS OF THE CONDUIT BANK.

39. THE EXISTING NO SWIMMING/NO DIVING SIGNS LOCATED ON THE UTILITY POLES ON THE BRIDGE SHALL BE GIVEN TO THE CITY ONCE REMOVED. THE RELOCATION OF THESE SIGNS IS THE RESPONSIBILITY OF THE CITY.

40. THE CONTRACTOR SHALL USE EXTREME CARE WHILE WORKING AROUND THE EXISTING WATER LINE AND WATER MANHOLE AT THE NORTH WEST END OF THE BRIDGE. ANY DAMAGE THAT IS INCURRED WILL BE REPAIRED/REPLACED AT THE CONTRACTOR'S EXPENSE.

41. THERE IS AN EXISTING SEWER LINE ON EACH END OF THE STRUCTURE AND THE LOCATION IS APPROXIMATE ON THE PLANS. USE EXTREME CARE WHILE WORKING IN THOSE AREAS. ANY DAMAGE INCURRED TO THE EXISTING SEWER LINE SHALL BE REPAIRED/REPLACED AT THE CONTRACTOR'S EXPENSE.

PROJECT NAME:	NEWPORT CITY
PROJECT NUMBER:	BRO 1449(25)

FILE NAME: 96J314/STR/96J314GN.dgn	PLOT DATE: 02-DEC-2011
PROJECT LEADER: C. CARLSON	DRAWN BY: D. PETERSON
DESIGNED BY: D. PETERSON	CHECKED BY: C. CARLSON
GENERAL NOTES	SHEET 3 OF 75

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES

ROADWAY	EROSION CONTROL	UTILITIES	TRAINING	BRIDGE	FULL E&C
1					
1800					
				540	
360					
15		170			
10					
1					
				280	
10		100		180	
320					
1110					
6					
1					
				187	
				1	
				1	
				1360	
				2	
				504090	
				14990	
				97090	
				1	
				1	
				1	
				50	
				56	
				940	
				800	
				1	
				10	
				10	
20					
20					
20					
1					
4					
2					
	10				

TOTALS

GRAND TOTAL	FINAL
1	
1800	
540	
360	
185	
10	
1	
280	
290	
320	
1110	
6	
1	
187	
1	
1	
1360	
2	
504090	
14990	
97090	
1	
1	
1	
50	
56	
940	
800	
1	
10	
10	
20	
20	
20	
1	
4	
2	
10	

DESCRIPTIONS

UNIT	ITEMS	ITEM NUMBER	ROUND
LS	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	201.10	
CY	COMMON EXCAVATION	203.15	
CY	UNCLASSIFIED CHANNEL EXCAVATION	203.27	
CY	SAND BORROW	203.31	
CY	TRENCH EXCAVATION OF EARTH	204.20	
CY	TRENCH EXCAVATION OF ROCK	204.21	
CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22	
CY	STRUCTURE EXCAVATION	204.25	
CY	GRANULAR BACKFILL FOR STRUCTURES	204.30	
SY	COLD PLANING, BITUMINOUS PAVEMENT	210.10	
CY	SUBBASE OF DENSE GRADED CRUSHED STONE	301.35	
CWT	EMULSIFIED ASPHALT	404.65	
LU	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	406.50	
CY	CONCRETE, HIGH PERFORMANCE CLASS B	501.34	
LS	PREPARING SUBSURFACE FOR DRIVING PILING	503.10	
LS	FURNISHING EQUIPMENT FOR DRIVING PILING	504.10	
LF	STEEL PILING FOR INTEGRAL ABUTMENTS, HP 12 X 84	505.265	
EACH	DYNAMIC PILE LOADING TEST	505.45	
LB	STRUCTURAL STEEL, PLATE GIRDER (FPQ)	506.55	
LB	REINFORCING STEEL (FPQ)	507.15	
LB	EPOXY COATED REINFORCING STEEL (FPQ)	507.17	
LS	SHEAR CONNECTORS (4965- 7/8" X 7")	508.15	
LS	STRUCTURAL PAINTING, SHOP APPLIED	513.25	
LS	SURFACE PREPARATION, SHOP	513.40	
GAL	WATER REPELLENT, SILANE	514.10	
LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10	
SY	SHEET MEMBRANE WATERPROOFING, TORCH APPLIED	519.20	
SY	REMOVAL OF BRIDGE PAVEMENT (FPQ)	529.10	
EACH	REMOVAL OF STRUCTURE (9600 SF - EST.)	529.15	
EACH	BEARING DEVICE ASSEMBLY, ELASTOMERIC PAD	531.11	
EACH	BEARING DEVICE ASSEMBLY, INTEGRAL ABUTMENT	531.14	
	BEGIN OPTION AA		
LF	18" CAAP .060 (2-2/3 X 1/2)	601.0215	
LF	18" PCCSP .064 (2-2/3 X 1/2)	601.0415	
LF	18" CPEP(SL)	601.2615	
	END OPTION AA		
EACH	PRECAST REINFORCED CONCRETE PIPE DI WITH CAST IRON GRATE	604.25	
EACH	CHANGING ELEVATION OF DROP INLETS, CATCH BASINS, OR MANHOLES	604.40	
EACH	CHANGING ELEVATION OF SEWER MANHOLES	604.42	
CY	STONE FILL, TYPE I	613.10	

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		EARTHWORKS SUMMARY
		FILL AVAILABLE
900	CY	ITEM 203.15 COMMON EXCAVATION (0.5 * 1800 CY)
162	CY	ITEM 203.27 UNCLASSIFIED CHANNEL EXCAVATION (0.3 * 540 CY)
56	CY	ITEM 204.20 TRENCH EXCAVATION OF EARTH (0.3 * 185 CY)
84	CY	ITEM 204.25 STRUCTURE EXCAVATION (0.3 * 280 CY)
1202	CY	FILL AVAILABLE
0	CY	FILL REQUIRED
1202		**WASTE**

N.A.B.I. = NOT A BID ITEM

FPQ = FINAL PAY QUANTITY

PROJECT NAME: NEWPORT CITY
PROJECT NUMBER: BRO 1449(25)

FILE NAME: s96j314_qs.xls
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
QUANTITY SHEET #1

PLOT DATE: 11/22/2011
DRAWN BY: STR3
CHECKED BY: D. PETERSON
SHEET 4 OF 75

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 2

SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
				ROADWAY	EROSION CONTROL	UTILITIES	TRAINING	BRIDGE	FULL E&C	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
				110				610		720		CY	STONE FILL, TYPE IV	613.13				
				335						335		LF	CAST-IN-PLACE CONCRETE CURB, TYPE B	616.28				
				195						195		SY	PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH	618.10				N.A.B.I. = NOT A BID ITEM
				24						24		SF	DETECTABLE WARNING SURFACE	618.30				FPQ = FINAL PAY QUANTITY
				685						685		LF	REMOVAL AND DISPOSAL OF GUARDRAIL	621.80				
						300				300		LF	DUCTILE IRON PIPE, CEMENT-LINED (12")	629.24				
						3				3		LF	DUCTILE IRON PIPE, CEMENT-LINED (14")	629.24				
						45				45		LF	DUCTILE IRON PIPE, CEMENT-LINED (6")	629.24				
						1				1		EACH	GATE VALVE WITH VALVE BOX (12")	629.27				
						2				2		EACH	GATE VALVE WITH VALVE BOX (6")	629.27				
						1				1		EACH	HYDRANT	629.28				
						1				1		LS	TRANSFER TO NEW SYSTEM, WATER SYSTEM	629.42				
						135				135		TON	CRUSHED STONE BEDDING	629.54				
				300						300		HR	UNIFORMED TRAFFIC OFFICERS	630.10				
				2000						2000		HR	FLAGGERS	630.15				
									1	1		LS	FIELD OFFICE, ENGINEERS	631.10				
									1	1		LS	TESTING EQUIPMENT, CONCRETE	631.16				
									1	1		LS	TESTING EQUIPMENT, BITUMINOUS	631.17				
									3000	3000		DL	FIELD OFFICE TELEPHONE (N.A.B.I.)	631.26				
							1400			1400		HR	EMPLOYEE TRAINEESHIP	634.10				
				1						1		LS	MOBILIZATION/DEMOBILIZATION	635.11				
				1						1		LS	TRAFFIC CONTROL	641.10				
				1						1		LS	PUBLIC RELATIONS OFFICER	641.12				
				1450						1450		LF	4 INCH WHITE LINE	646.20				
				1450						1450		LF	4 INCH YELLOW LINE	646.21				
				28						28		LF	CROSSWALK MARKING	646.31				
				20				530		550		SY	GEOTEXTILE UNDER STONE FILL	649.31				
					190					190		SY	GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED	649.515				
					380					380		SY	GEOTEXTILE FOR FILTER CURTAIN	649.61				
					10					10		LB	SEED	651.15				
					10					10		LB	SEED, WINTER RYE	651.17				
					30					30		LB	FERTILIZER	651.18				
					1					1		TON	AGRICULTURAL LIMESTONE	651.20				
					0.1					0.1		TON	HAY MULCH	651.25				
				40						40		CY	TOPSOIL	651.35				
								170		170		SY	GRUBBING MATERIAL	651.40				
					1					1		LS	EPSC PLAN	652.10				
					100					100		HR	MONITORING EPSC PLAN	652.20				
					1					1		LU	MAINTENANCE OF EPSC PLAN (N.A.B.I.)	652.30				
					160					160		SY	TEMPORARY EROSION MATTING	653.20				

PROJECT NAME: NEWPORT CITY
PROJECT NUMBER: BRO 1449(25)

FILE NAME: s96j314_qs.xls
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
QUANTITY SHEET #2

PLOT DATE: 11/22/2011
DRAWN BY: STR3
CHECKED BY: D. PETERSON
SHEET 5 OF 75

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 3

SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
				ROADWAY	EROSION CONTROL	UTILITIES	TRAINING	BRIDGE	FULL E&C	GRAND TOTAL FINAL		UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
					20					20		CY	VEHICLE TRACKING PAD	653.35				
					1					1		EACH	INLET PROTECTION DEVICE, TYPE I	653.40				
					500					500		LF	BARRIER FENCE	653.50				
				20						20		SF	TRAFFIC SIGNS, TYPE A	675.20				
				73						73		LF	SQUARE TUBE SIGN POST AND ANCHOR	675.341				
				1						1		EACH	REMOVING SIGNS	675.50				
				5						5		EACH	ERECTING SALVAGED SIGNS	675.60				
						180				180		LF	ELECTRICAL CONDUIT (2")(PVC)	678.21				
						40				40		LF	ELECTRICAL CONDUIT (5") (PVC)	678.21				
						800				800		LF	ELECTRICAL WIRING	678.24				
						2				2		EACH	PULL BOX, STANDARD	678.25				
								4		4		EACH	LIGHT POLE BASE	679.21				N.A.B.I. = NOT A BID ITEM
								4		4		EACH	LIGHT POLE	679.45				FPQ = FINAL PAY QUANTITY
								4		4		EACH	LUMINAIRE	679.50				
				1						1		LU	PRICE ADJUSTMENT, FUEL (N.A.B.I.)	690.50				
								434		434		CY	SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, CLASS A LOW CEMENT)	900.608				
				680						680		LF	SPECIAL PROVISION (BOX BEAM GUARDRAIL, PAINTED)	900.640				
								638		638		LF	SPECIAL PROVISION (BRIDGE RAILING, GALV. METAL BALUSTER RAILING/CONCRETE PARAPET COMBINATION)	900.640				
								810		810		LF	SPECIAL PROVISION (DRILLED SHAFT IN EARTH) (5'-0" TO 5'-6" DIA.)	900.640				
								40		40		LF	SPECIAL PROVISION (DRILLED SHAFT OBSTRUCTION DRILLING AND REMOVAL)	900.640				
						195				195		LF	SPECIAL PROVISION (DUCT BANK)(13 CONDUIT)	900.640				
								1		1		LS	SPECIAL PROVISION (MOBILIZATION OF DRILLED SHAFT EQUIPMENT)	900.645				
				1						1		LU	SPECIAL PROVISION (MAT DENSITY PAY ADJUSTMENT, SMALL QUANTITY)(N.A.B.I.)	900.650				
				1						1		LU	SPECIAL PROVISION (MIXTURE PAY ADJUSTMENT)(N.A.B.I.)	900.650				
				434				176		610		TON	SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)	900.680				

PROJECT NAME: NEWPORT CITY
PROJECT NUMBER: BRO 1449(25)

FILE NAME: s96j314_qs.xls
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
QUANTITY SHEET #3

PLOT DATE: 12/15/2011
DRAWN BY: STR3
CHECKED BY: D. PETERSON
SHEET 6 OF 75

STATE OF VERMONT
AGENCY OF TRANSPORTATION

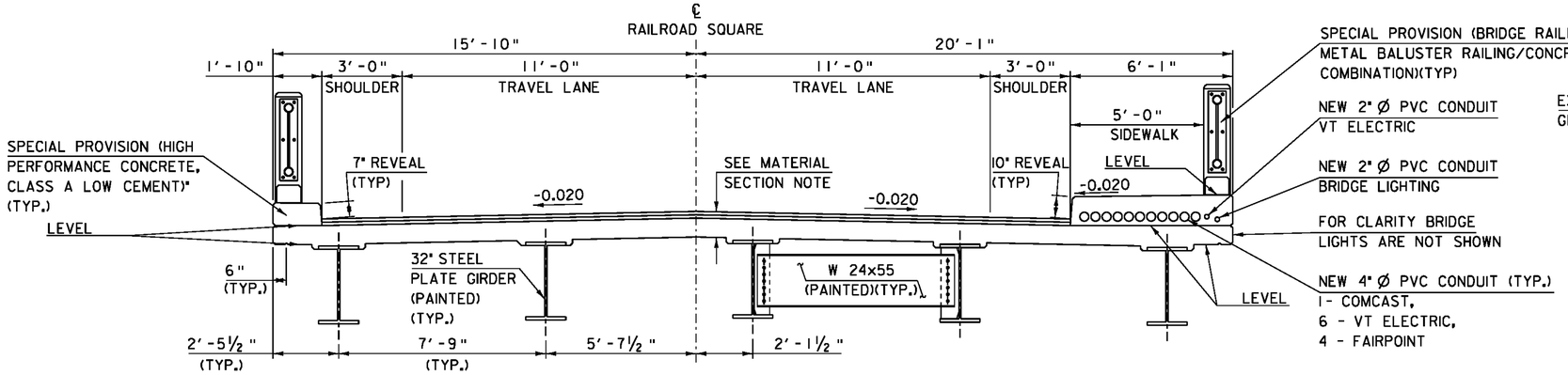
BRIDGE QUANTITY SHEET 1

SUMMARY OF BRIDGE QUANTITIES								TOTALS	DESCRIPTIONS			DETAILED SUMMARY OF QUANTITIES		
SUPERSTRUCTURE	DECK	APPROACH SLAB 1	APPROACH SLAB 2	ABUTMENT 1	ABUTMENT 2	PIER 1	PIER 2	BRIDGE TOTAL	UNIT	ITEMS	ITEM NUMBER	QUANTITIES	UNIT	ITEMS
				310	230			540	CY	UNCLASSIFIED CHANNEL EXCAVATION	203.27			
				135	145			280	CY	STRUCTURE EXCAVATION	204.25			
				80	100			180	CY	GRANULAR BACKFILL FOR STRUCTURES	204.30			
		19	19	25	29	47	48	187	CY	CONCRETE, HIGH PERFORMANCE CLASS B	501.34			
				0.5	0.5			1	LS	PREPARING SUBSURFACE FOR DRIVING PILING	503.10			
				0.5	0.5			1	LS	FURNISHING EQUIPMENT FOR DRIVING PILING	504.10			
				675	685			1360	LF	STEEL PILING FOR INTEGRAL ABUTMENTS, HP 12 X 84	505.265			
				1	1			2	EACH	DYNAMIC PILE LOADING TEST	505.45			
504090								504090	LB	STRUCTURAL STEEL, PLATE GIRDER (FPQ)	506.55			
				2890	3420	4350	4330	14990	LB	REINFORCING STEEL (FPQ)	507.15			
9845	77130	2990	2990	2005	2130			97090	LB	EPOXY COATED REINFORCING STEEL (FPQ)	507.17			
1								1	LS	SHEAR CONNECTORS (4965- 7/8" X 7")	508.15			
1								1	LS	STRUCTURAL PAINTING, SHOP APPLIED	513.25			
1								1	LS	SURFACE PREPARATION, SHOP	513.40			
	28			5	5	6	6	50	GAL	WATER REPELLENT, SILANE	514.10			
56								56	LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10			
940								940	SY	SHEET MEMBRANE WATERPROOFING, TORCH APPLIED	519.20			
800								800	SY	REMOVAL OF BRIDGE PAVEMENT (FPQ)	529.10			
1								1	EACH	REMOVAL OF STRUCTURE (9600 SF - EST.)	529.15			
						5	5	10	EACH	BEARING DEVICE ASSEMBLY, ELASTOMERIC PAD	531.11			
				5	5			10	EACH	BEARING DEVICE ASSEMBLY, INTEGRAL ABUTMENT	531.14			
				300	310			610	CY	STONE FILL, TYPE IV	613.13			
				250	280			530	SY	GEOTEXTILE UNDER STONE FILL	649.31			
				80	90			170	SY	GRUBBING MATERIAL	651.40			
4								4	EACH	LIGHT POLE BASE	679.21			
4								4	EACH	LIGHT POLE	679.45			
4								4	EACH	LUMINAIRE	679.50			
	389			21	24			434	CY	SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, CLASS A LOW CEMENT)	900.608			
638								638	LF	SPECIAL PROVISION (BRIDGE RAILING, GALV. METAL BALUSTER RAILING/CONCRETE PARAPET COMBINATION)	900.640			
						405	405	810	LF	SPECIAL PROVISION (DRILLED SHAFT IN EARTH) (5'-0" TO 5'-6" DIA.)	900.640			
						20	20	40	LF	SPECIAL PROVISION (DRILLED SHAFT OBSTRUCTION DRILLING AND REMOVAL)	900.640			
						0.5	0.5	1	LS	SPECIAL PROVISION (MOBILIZATION OF DRILLED SHAFT EQUIPMENT)	900.645			
176								176	TON	SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)	900.680			

PROJECT NAME: NEWPORT CITY
PROJECT NUMBER: BRO 1449(25)

FILE NAME: s96j314_qs.xls
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
BRIDGE QUANTITY SHEET #1

PLOT DATE: 12/15/2011
DRAWN BY: STR3
CHECKED BY: D. PETERSON
SHEET 7 OF 75

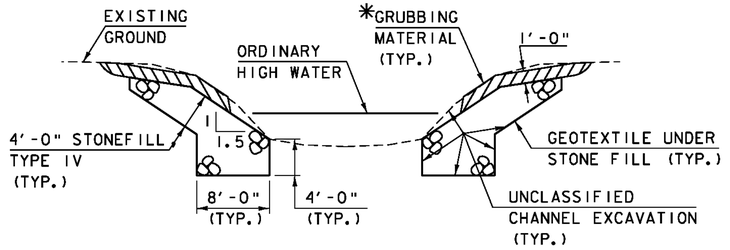


BRIDGE TYPICAL

SCALE ⅜" = 1′-0"

MATERIAL SECTION
- 1½" BCP, TYPE IVS
- 1½" BCP, TYPE IVS
- 8½" SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, CLASS A LOW CEMENT)*
- SHEET MEMBRANE WATERPROOFING, TORCH APPLIED

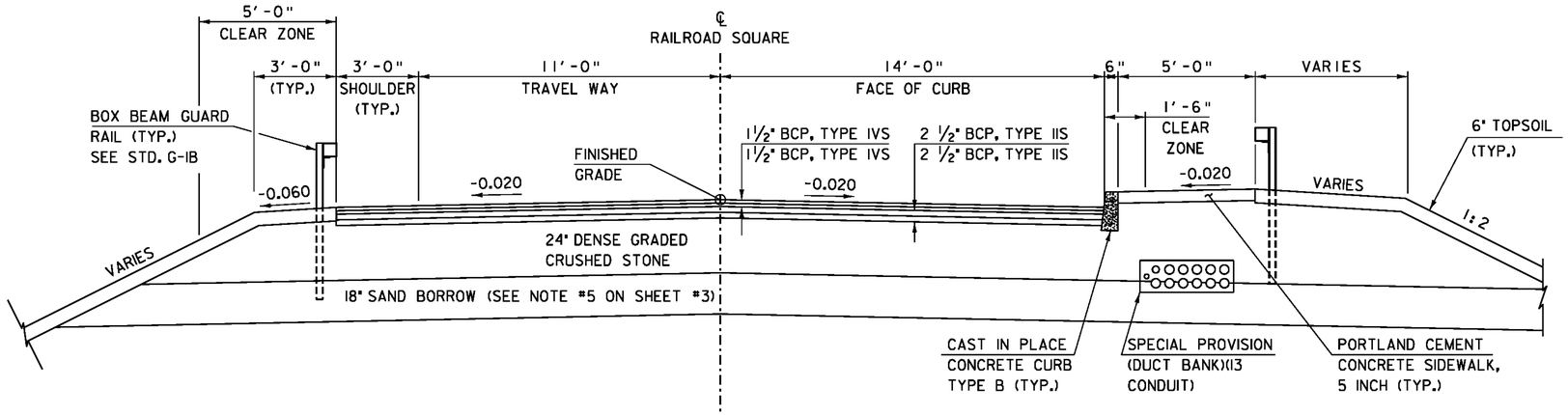
BCP SHOULD BE READ AS BITUMINOUS CONCRETE PAVEMENT AND SHALL BE PAID FOR UNDER ITEM 900.680 "SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)".



TYPICAL CHANNEL SECTION

(NOT TO SCALE)

*GRUBBING MATERIAL SHALL NOT BE PLACED ON THE STONE FILL IN THE AREA UNDER THE BRIDGE. WHENEVER CHANNEL SLOPE INTERSECTS ROADWAY SUBBASE, GRUBBING MATERIAL SHALL BEGIN AT THE BOTTOM OF SUBBASE.



WITHOUT SIDEWALK

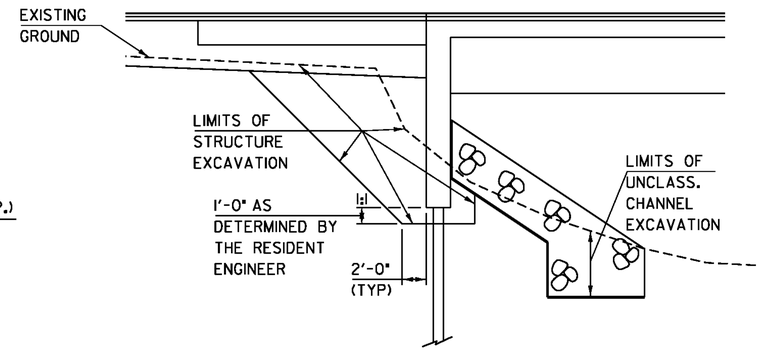
WITH SIDEWALK

ROADWAY TYPICAL

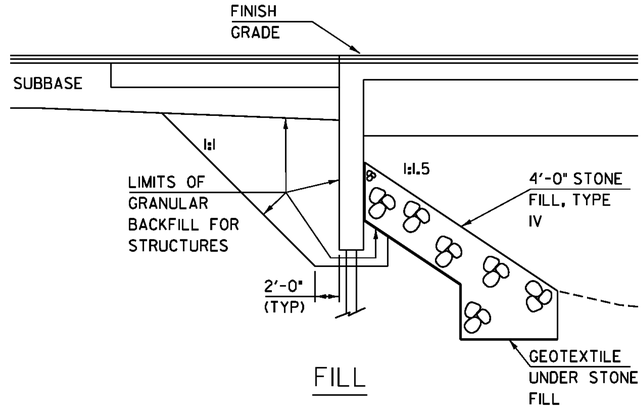
SCALE ⅜" = 1′-0"

TACK COAT:
EMULSIFIED ASPHALT IS TO BE APPLIED AT THE RATE OF 0.025 GAL/SY

BETWEEN SUCCESSIVE COURSES OF PAVEMENT AS DIRECTED BY THE ENGINEER.



EXCAVATION



FILL

ABUTMENT EARTHWORK LIMITS

N.T.S.

MATERIAL TOLERANCES

(IF USED ON PROJECT)

SURFACE	
- PAVEMENT (TOTAL THICKNESS)	+/- ¼"
- AGGREGATE SURFACE COURSE	+/- ½"
SUBBASE	+/- 1"
SAND BORROW	+/- 1"

PROJECT NAME: NEWPORT CITY
PROJECT NUMBER: BRO 1449(25)

FILE NAME: 96J314\str\s96J314typ.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
TYPICAL SECTIONS

PLOT DATE: 02-DEC-2011
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 8 OF 75

GPS CONTROL POINTS

HVCTRL #1

STANDARD DISK STAMPED

G 56

N = 889998.761

E = 1717106.014

ELEV: = 685.700

The mark is at the intersection of U.S. 5, VT. 105 and VT 191. The mark is 127 ft east of 5 & 105 center median, 42 ft south of the 191 center median, 8.5 ft east of a supporting leg for a highway sign cross-beam, 7.5 ft west of the west end of a chain link fence. This bench mark has been designated a basic net "A" levelline junction mark.

HVCTRL #2

STANDARD DISK STAMPED

Gaging Station RM

N = 888714.210

E = 1716495.107

ELEV: =687.730

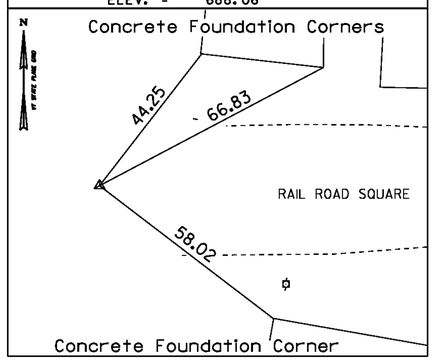
To reach from the intersection of U.S. 5 & VT 105 & VT 191. Go south along US 5 & VT 105 for 0.15 mi to the enterance of a shopping plaza right. Turn right and continue south to the southern end of the parking lot and a gaging station at the edge of Lake Memphremagog. The mark is a USGS gaging station referance mark set flush with the ground, in the top of a 1 ft dia. concrete monument. It is 11.5 ft southwest of & level with the edge of the parking lot. 55.8 ft northwest of the railroad tracks northwest rail, 21 ft northeast of the lake, 36.7 ft south of a 6 in maple, 22.15 ft northwest of the southwest corner of the gaging station and a fiberglass witness post.

- DESCRIPTION PROVIDED BY VERMONT AGENCY OF TRANSPORTATION GEODETIC SURVEY UNIT

TRAVERSE TIES

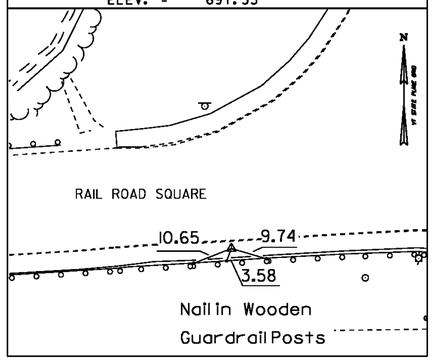
HVCTRL #3

NORTH =	888226.74
EAST =	1716647.28
ELEV. =	688.06



HVCTRL #4

NORTH =	888249.17
EAST =	1717459.64
ELEV. =	691.35



NORTH =	
EAST =	
ELEV. =	

NORTH =	
EAST =	
ELEV. =	

NORTH =	
EAST =	
ELEV. =	

- MAIN TRAVERSE COMPLETED 12/07/00 by R. Gilman & R. Bullock

ALIGNMENT DATA

DATUM	
VERTICAL	NAVD 88
HORIZONTAL	NAD 83 (96)
ADJUSTMENT	Compass

PROJECT NAME: Newport City

PROJECT NUMBER: BRO 1449 (25)

FILE NAME: 96J314\survey\x96J314ti.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
TIE SHEET

PLOT DATE: 22-NOV-2011
DRAWN BY: R. Bullock
CHECKED BY: C. CARLSON
SHEET 9 OF 75

CURVE NO. 1 DATA

Delta = 2°44'45.92"
D = 2°51'53.24" LT.
R = 2000.00'
T = 47.94'
L = 95.85'
E = 0.57'

REMOVAL AND DISPOSAL OF GUARDRAIL
11+57.98 LT - 11+97.00 LT
11+58.50 RT - 11+97.00 RT
14+98.62 RT - 15+50.00 RT
15+03.77 LT - 15+50.00 LT

CAST-IN-PLACE CONCRETE CURB, TYPE B
11+58.01 RT - 11+96.00 RT
15+00.00 RT - 15+50.00 RT

PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH
11+58.01 RT - 11+96.00 RT
15+00.00 RT - 15+50.00 RT

SPECIAL PROVISION (BOX BEAM GUARDRAIL, PAINTED)
11+62.42 LT - 11+88.50 LT
11+62.93 RT - 11+88.50 RT
15+05.48 RT - 15+50.00 RT
15+05.48 LT - 15+50.00 LT

SIDEWALK RAMP, TYPE 6
11+60.50 RT

DETECTABLE WARNING SURFACE
11+60.50 RT

PULL BOX
11+70.00 RT

~~**ELECTRICAL CONDUIT (5")(PVC)**~~
~~11+64.37 RT - 11+69.19 RT~~

SPECIAL PROVISION (DUCT BANK) (13 CONDUIT)
11+70.66 RT - 11+96.50 RT
14+97.48 RT - 15+50.00 RT

CHANGING ELEVATIONS OF SEWER MANHOLES
11+20.10 LT
~~15+31.43 RT~~

CHANGING ELEVATIONS OF DROP INLETS, CATCH BASINS OR MANHOLES
10+89.75 LT
11+01.78 RT
11+05.08 RT
11+62.32 LT

HVCTRL #201
HVCTRL #100
POB
10+00.00
BEGIN APPROACH
STA. 10+50.00
PC
STA. 10+90.46
BLDG.
GUY WIRE
COMB.
8" PVC
EXISTING ROW
WOOD POST
CONC. PAD
CONC. POST
SHRUB
SIGN
TO US RTE 5
10+00 N89°23'54.03"E
TH 11
(RAILROAD SQUARE)
SMH
MH
DIAG.
AER E&T
END APPROACH/
BEGIN PROJECT
STA. 11+00.00
PI
STA. 11+38.39
LOCATION OF NEW
UTILITY POLE
P.T
STA. 11+86.31
CONC. SIDEWALK
CONC. WALL
STONE FILL
TYPE IV
℄ BRG. ABUT. 1
STA. 11+98.00
BEGIN BRIDGE
STA. 11+97.17
F.G. = 689.07
LAKE MEMPHREMAGOG
℄ BRG. PIER NO. 1
STA. 12+87.00
N86°39'08.10"E
℄ BRG. PIER NO. 2
STA. 14+07.00
FOR WATERLINE DETAILS
SEE SHEET AE2
MAINLINE STA. 15+00.00 =
CHANNEL STA. 50+75.00 = 90°
END BRIDGE
STA. 14+96.83
F.G. = 691.18
℄ BRG. ABUT. 2
STA. 14+96.00
CHANNEL POE
STA. 51+50.00
N3°20'51.90"W
GUY WIRE
GUY POLE
WATER LINE
STONE FILL
TYPE IV
CHANNEL POB
STA. 50+00.00
MATCH LINE STA. 15+50.00
POPLAR
GATE VALVE
POPLARS
TEMPORARY RELOCATION
OF UTILITIES
HVCTRL #200

EXISTING BRIDGE DATA

FIVE SIMPLE SPAN ROLLED BEAM
BUILT 1947
OVERALL LENGTH 300'
SPAN LENGTH - 60'
5'-0" SIDEWALK
1'-10" CURB
ROADWAY WIDTH 24'-0"
OUT TO OUT WIDTH 32'-2"
ABUTMENTS AND PIERS ARE CONCRETE ON TIMBER PILES

SEE SHEETS 16-18 FOR SIGNS AND PAVEMENT MARKING DETAILS.

SCALE 1" = 20'-0"
20 0 20

PROJECT NAME:	NEWPORT CITY
PROJECT NUMBER:	BRO 1449(25)
FILE NAME: 96J314\str\s96J314bdr.dgn	PLOT DATE: 02-DEC-2011
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: D. PETERSON	CHECKED BY: C. CARLSON
PLAN SHEET 1	SHEET 10 OF 75

REMOVAL AND DISPOSAL OF GUARDRAIL
15+50.00 RT - 18+69.06 RT
15+50.00 LT - 17+35.34 LT

CAST-IN-PLACE CONCRETE CURB, TYPE B
15+50.00 RT - 17+75.00 RT
17+50.25 LT - 17+75.00 LT

PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH
15+50.00 RT - 17+75.00 RT
17+50.25 LT - 17+75.00 LT

SPECIAL PROVISION (BOX BEAM GUARDRAIL, PAINTED)
15+50.00 RT - 18+77.80 RT
15+50.00 LT - 17+56.13 LT

SIDEWALK RAMP, TYPE 6
17+52.40 LT
17+52.40 RT

PRECAST REINFORCED CONCRETE PIPE DI WITH CAST IRON GRATE
16+21.33 RT

PULL BOX
16+53.00 RT

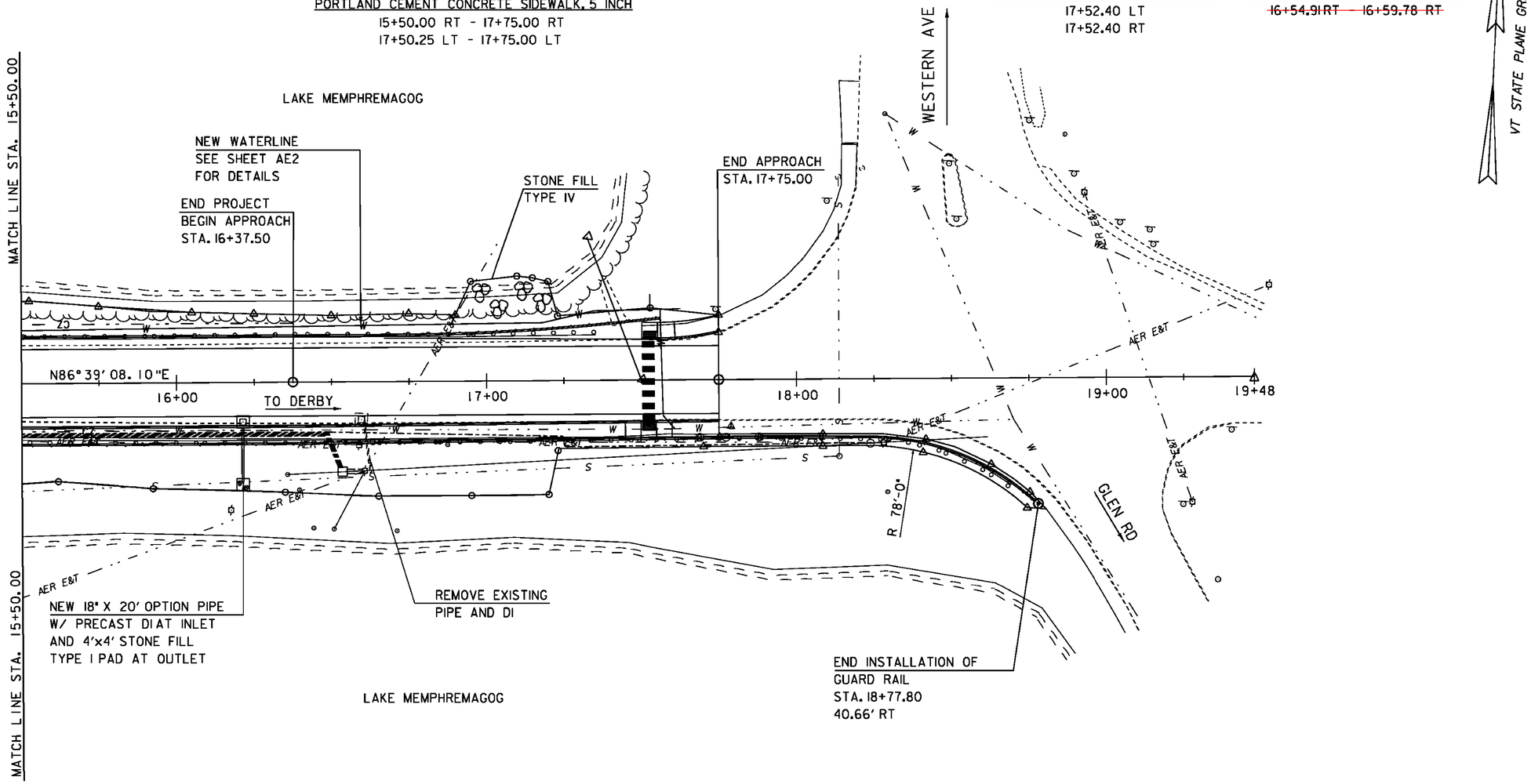
DETECTABLE WARNING SURFACE
17+52.40 LT
17+52.40 RT

SPECIAL PROVISION (DUCT BANK) (13 CONDUIT)
15+50.00 RT - 16+53.43 RT

ELECTRICAL CONDUIT (2")(PVC)
16+48.87 RT - 18+53.04 RT

~~ELECTRICAL CONDUIT (5")(PVC)~~
~~16+54.91RT - 16+59.78 RT~~

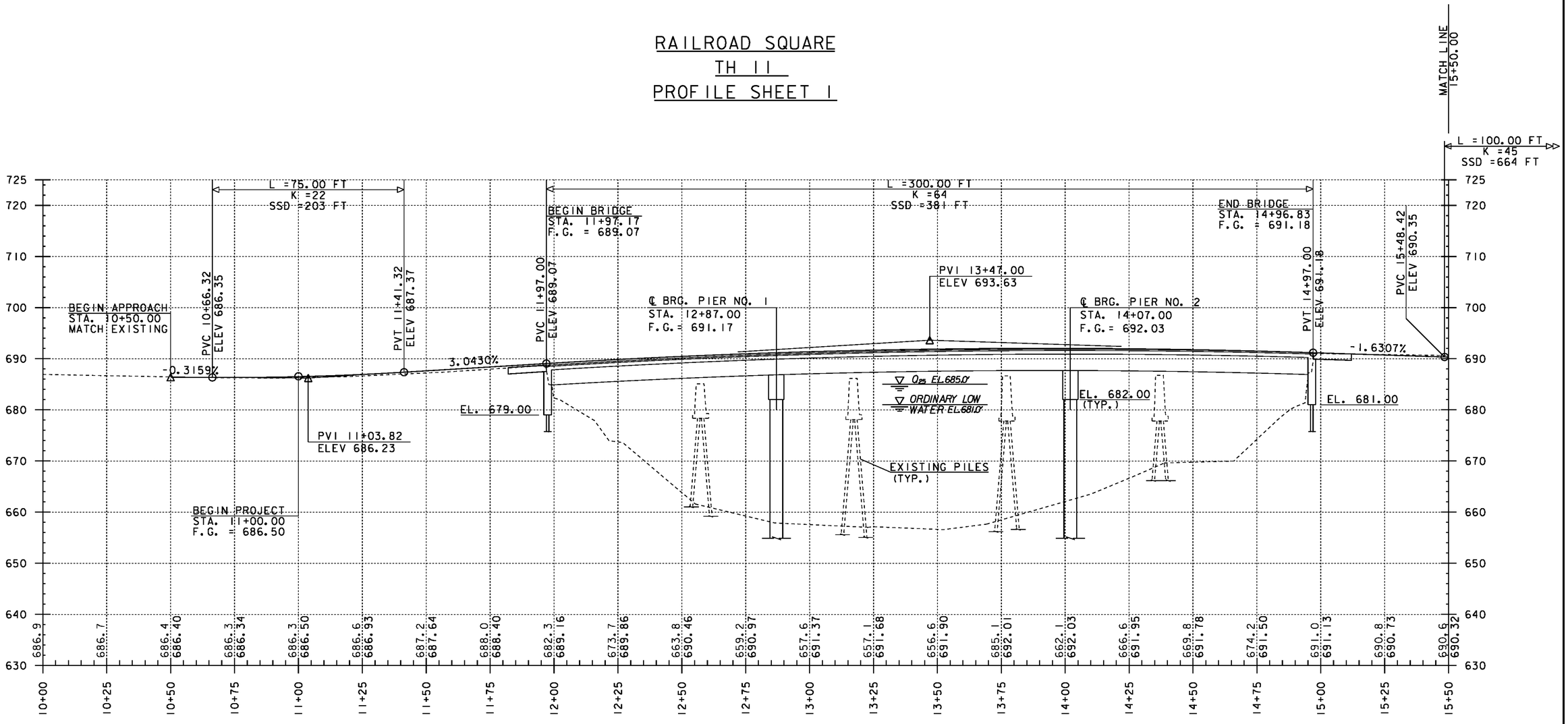
N
VT STATE PLANE GRID

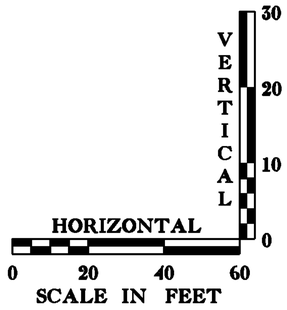


SCALE 1" = 20'-0"
20 0 20

PROJECT NAME:	NEWPORT CITY
PROJECT NUMBER:	BRO 1449(25)
FILE NAME: 96J314\str\s96J314bdr.dgn	PLOT DATE: 02-DEC-2011
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: D. PETERSON	CHECKED BY: C. CARLSON
PLAN SHEET 2	SHEET 11 OF 75

RAILROAD SQUARE
TH 11
PROFILE SHEET 1





ELEVATIONS SHOWN TO THE NEAREST TENTH ARE EXISTING GROUND ALONG THE PROPOSED ALIGNMENT. ELEVATIONS SHOWN TO THE NEAREST HUNDREDTH ARE FINISHED GRADES ALONG THE PROPOSED ALIGNMENT.

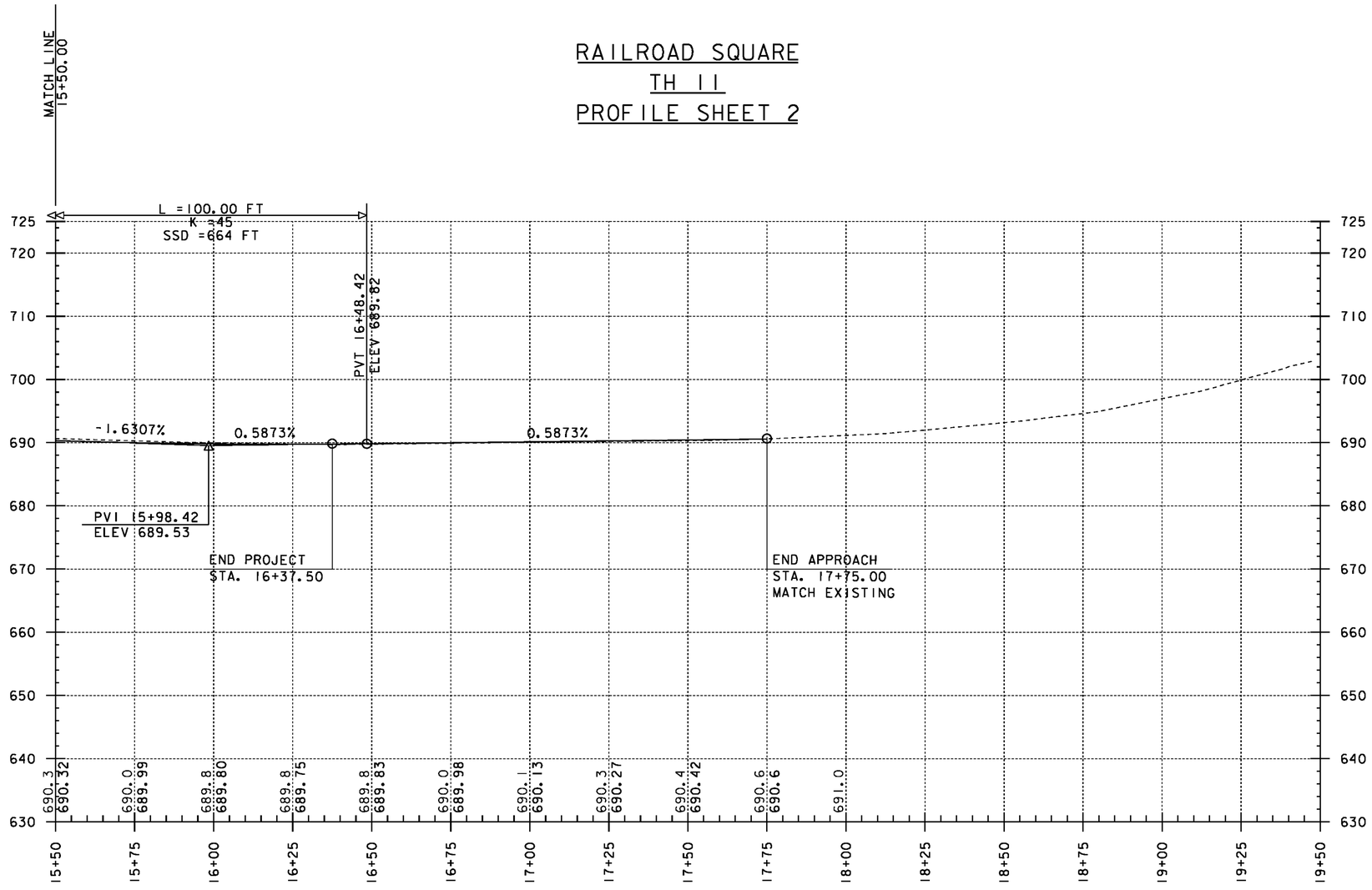
PROJECT NAME: NEWPORT CITY

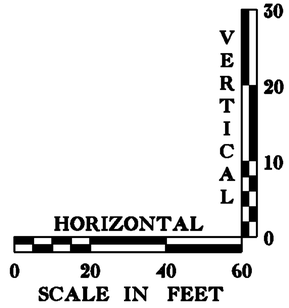
PROJECT NUMBER: BRO 1449(25)

FILE NAME: 96J314\str\s96J314xsl.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
PROFILE SHEET 1

PLOT DATE: 22-NOV-2011
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 12 OF 75

RAILROAD SQUARE
TH 11
PROFILE SHEET 2





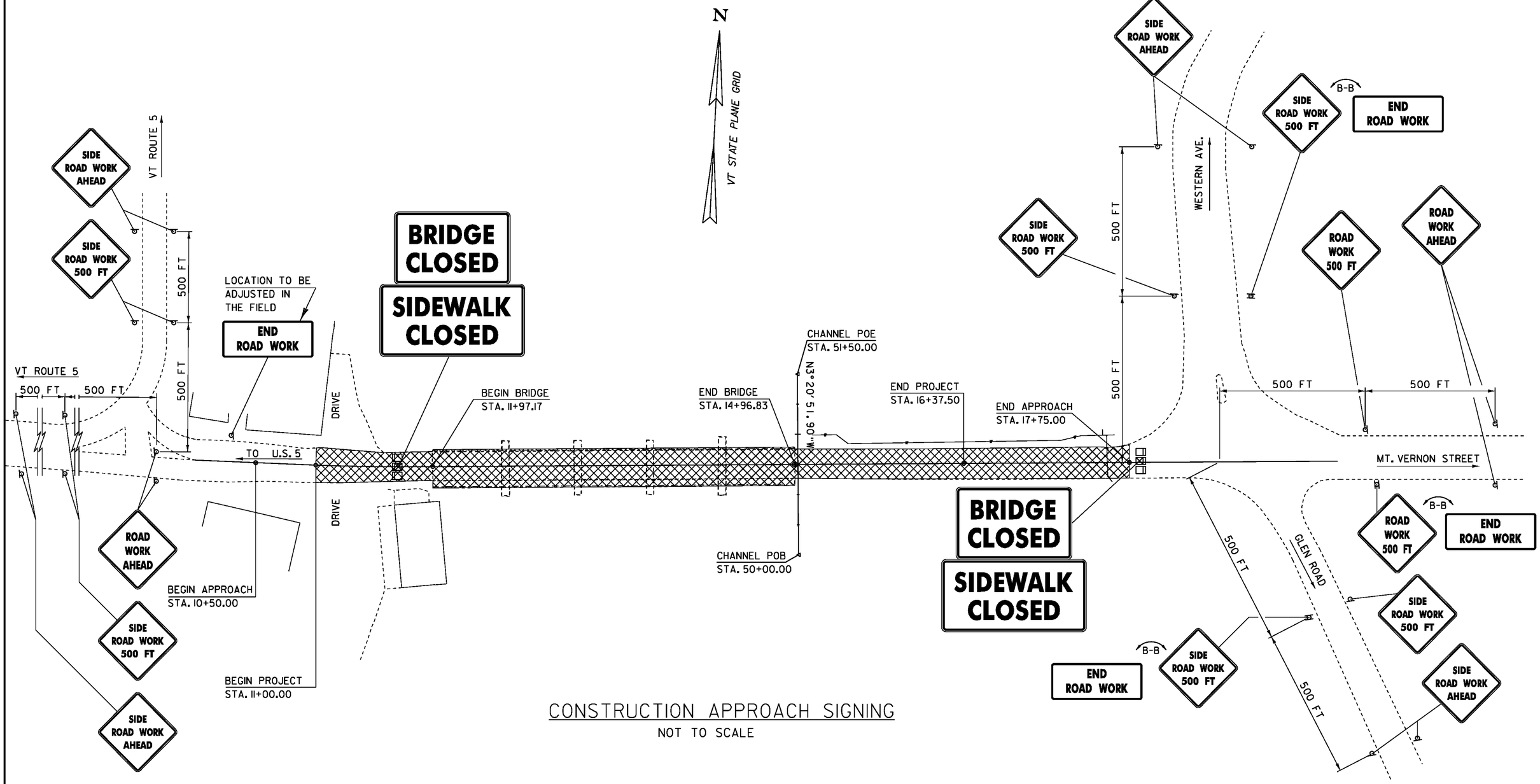
ELEVATIONS SHOWN TO THE NEAREST TENTH ARE EXISTING GROUND ALONG THE PROPOSED ALIGNMENT. ELEVATIONS SHOWN TO THE NEAREST HUNDREDTH ARE FINISHED GRADES ALONG THE PROPOSED ALIGNMENT.

PROJECT NAME: NEWPORT CITY

PROJECT NUMBER: BRO 1449(25)

FILE NAME: 96J314/str/96J314xsl.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
PROFILE SHEET 2

PLOT DATE: 22-NOV-2011
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 13 OF 75



CONSTRUCTION APPROACH SIGNING

NOT TO SCALE

LEGEND

- TYPE III BARRICADE (SEE STD. E-107)
- TYPE III BARRICADE (MOD.) (SEE STD. E-107A)
- WORK AREA

NOTES:
PAYMENT FOR ALL ON AND OFF PROJECT CONSTRUCTION SIGNING AND BARRICADES WILL BE MADE UNDER CONTRACT ITEM 641.10, TRAFFIC CONTROL.

SEE NOTE #26 ON SHEET #3 OF 75

PROJECT NAME: NEWPORT CITY
PROJECT NUMBER: BRO 1449(25)

FILE NAME: str/96314trfcontrol.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: C. CARLSON
TRAFFIC CONTROL SHEET

PLOT DATE: 22-NOV-2011
DRAWN BY: str3
CHECKED BY: C. CARLSON
SHEET 14 OF 75

N

MAG NORTH

LAKE MEMPHREMAGOG

DETOUR
M4-10L

SEE RAILROAD SQUARE SIGN DETAIL THIS SHEET

DETOUR
M4-10L

DETOUR
M4-10R

5

191 ACCESS RD.

SEE RAILROAD SQUARE SIGN DETAIL THIS SHEET

WESTERN AVE.

DETOUR
M4-8

DETOUR
M4-10R

DETOUR
M4-8

END DETOUR
M4-8a

DETOUR
M4-8

WESTERN AVE.

DETOUR
M4-10R

DETOUR
M4-10L

191 ACCESS RD.

SEE RAILROAD SQUARE SIGN DETAIL THIS SHEET

MT VERNON ST.

GLEN RD.

SEE RAILROAD SQUARE SIGN DETAIL THIS SHEET

DETOUR
500 FT
W20-2

SEE RAILROAD SQUARE SIGN DETAIL THIS SHEET

5
TRUCK ROUTE

DETOUR AHEAD
W20-2

DETOUR
M4-10L

DETOUR
500 FT
W20-2

SEE RAILROAD SQUARE SIGN DETAIL THIS SHEET

DETOUR AHEAD
W20-2

DETOUR
M4-8

DETOUR AHEAD
W20-2

SEE RAILROAD SQUARE SIGN DETAIL THIS SHEET

RAILROAD SQUARE
BRIDGE CLOSED
TO TRAFFIC

3.2 5 3.8 5 5 3.7 6 3.3 = 30

3.9 27.6 2.4 22.2 3.9 = 60

7.6 19.2 5 20.6 7.6 = 60

13.3 6.3 5 22.1 13.3 = 60

3.8" RADIUS, 0.9" BORDER, 0.6" INDENT, BLACK ON WHITE;
[RAILROAD SQUARE] C 40} SPACING; [BRIDGE CLOSED] C;
[TO TRAFFIC] C;

RAILROAD SQUARE SIGN DETAIL

NOT TO SCALE

NOT TO SCALE

PROJECT NAME:	NEWPORT CITY
PROJECT NUMBER:	BRO 1449(25)
FILE NAME: str/96J314trfcontrol.dgn	PLOT DATE: 22-NOV-2011
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: D. PETERSON	CHECKED BY: D. PETERSON
TRAFFIC CONTROL SHEET 2	SHEET 15 OF 75

LEGEND

N - NEW
S - SALVAGE
R - REMOVE
R & S - REMOVE AND SALVAGE

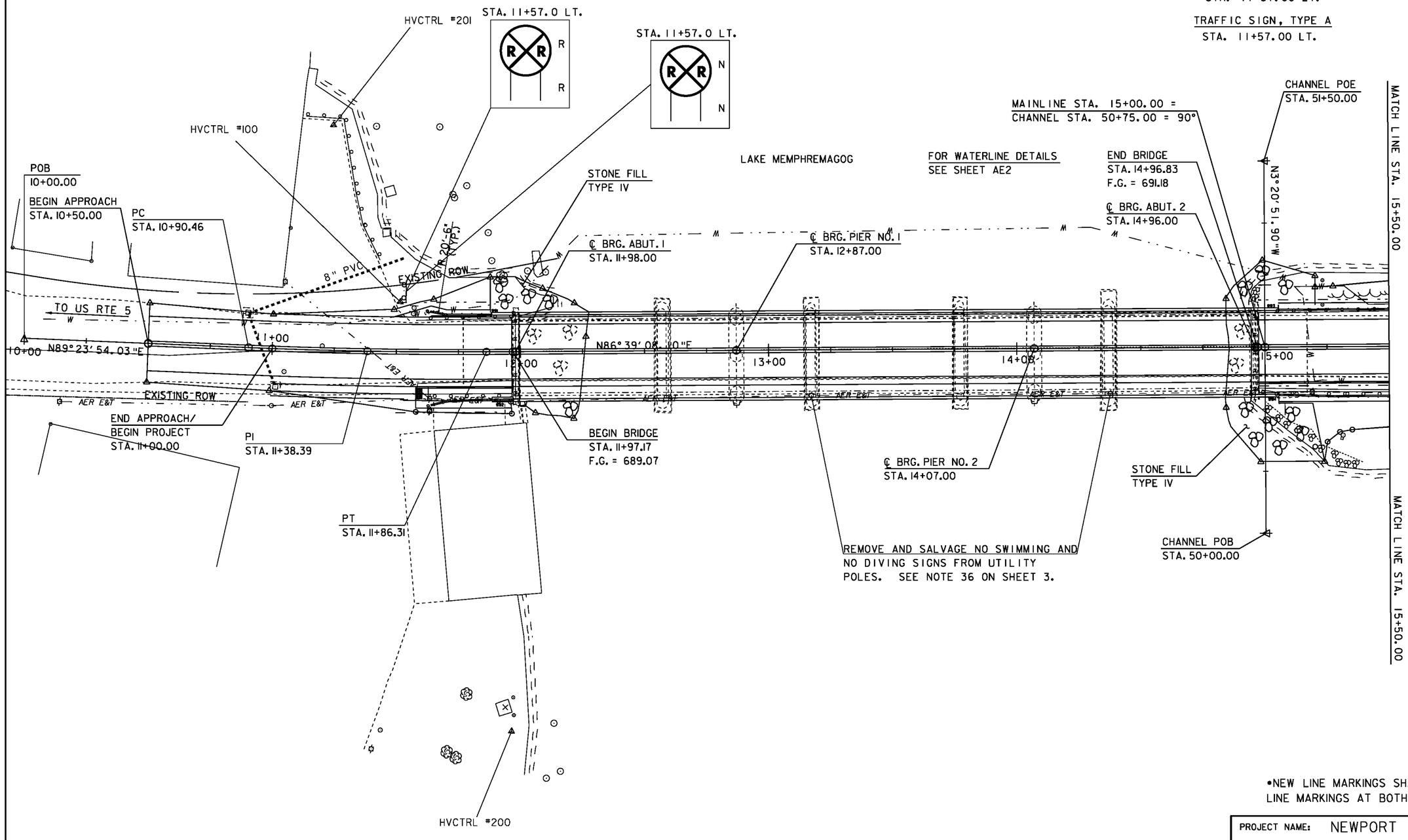
CURVE NO. 1 DATA
Delta = 2°44'45.92"
D = 2°51'53.24" LT.
R = 2000.00'
T = 47.94'
L = 95.85'
E = 0.57'

4" YELLOW LINE*
STA. 10+50.0 ℄ - 15+50.0 ℄ (DOUBLE)

4" WHITE LINE*
STA. 10+50.0 LT. - 15+50.0 LT.
STA. 10+50.0 RT. - 15+50.0 RT.

REMOVING SIGNS
STA. 11+57.00 LT.

TRAFFIC SIGN, TYPE A
STA. 11+57.00 LT.



SCALE 1" = 20'-0"
20 0 20

*NEW LINE MARKINGS SHALL MATCH INTO EXISTING LINE MARKINGS AT BOTH ENDS OF THE PROJECT

PROJECT NAME: NEWPORT CITY
PROJECT NUMBER: BRO 1449(25)

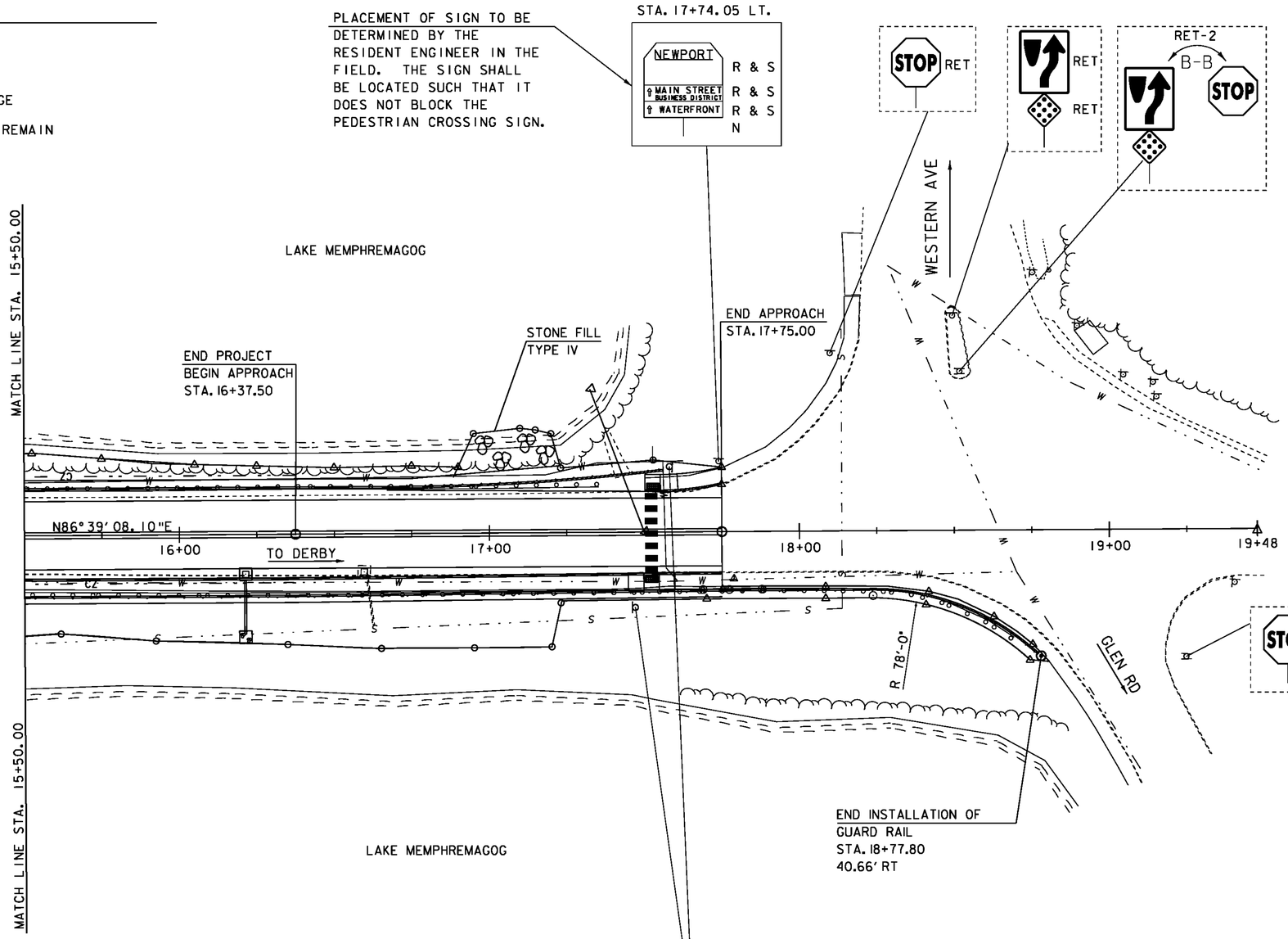
FILE NAME: 96J314/str/96J314trf.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: C. CARLSON
SIGN & PAVEMENT MARKING LAYOUT SHEET 1

PLOT DATE: 22-NOV-2011
DRAWN BY: str3
CHECKED BY: C. CARLSON
SHEET 16 OF 75

LEGEND

N - NEW
S - SALVAGE
R - REMOVE
R & S - REMOVE AND SALVAGE

RET — EXISTING SIGNS TO REMAIN IN PLACE (RETAIN)



CROSSWALK MARKING
STA. 17+52.25 (26 FT)

REMOVING SIGNS
STA. 17+74.05 LT. (3 EA.)

4" WHITE LINE*
STA. 15+50.0 LT. - 17+75.0 LT.
STA. 15+50.0 RT. - 17+75.0 RT.

4" YELLOW LINE*
STA. 15+50.0 ℄ - 17+75.0 ℄ (DOUBLE)

TRAFFIC SIGN, TYPE A
STA. 17+47.00 RT. (2 EA)
STA. 17+58.16 LT. (2 EA)

ERECTING SALVAGED SIGNS
STA. 17+74.05 LT. (3 EA.)

SCALE 1" = 20'-0"
20 0 20

*NEW LINE MARKINGS SHALL MATCH INTO EXISTING LINE MARKINGS AT BOTH ENDS OF THE PROJECT

PROJECT NAME:	NEWPORT CITY
PROJECT NUMBER:	BRO 1449(25)
FILE NAME: 96J314/str/96J314trf.dgn	PLOT DATE: 22-NOV-2011
PROJECT LEADER: C. CARLSON	DRAWN BY: str3
DESIGNED BY: C. CARLSON	CHECKED BY: C. CARLSON
SIGN & PAVEMENT MARKING LAYOUT SHEET 2	SHEET 17 OF 75

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILE MARKER, STATION OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS			NEW & SALVAGED SIGNS				EXIST POST		NEW SIGN POSTS																						REMARKS	SIGN DETAIL	
		EACH	WIDTH (in)	HEIGHT (in)	"A"	"B"	SALV SIGN	SALV TIS	RETAIN	SALVAGE	NO. OF POST	FLANGED CHANNEL (LB / FT)			SQUARE STEEL (in) (LB / FT)			ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (IN) (LB / FT)			FOUNDATION	TUBULAR STEEL Ø (IN) (LB / FT)				W-SHAPE STEEL FTG. SIZE		WEIGHT	POST SIZE	SIGN FRAME REQUIRED		DETAIL ON SHEET NUMBER	STANDARD SHEET NUMBER / STANDARD HIGHWAY SIGNS = (SHS)
												1.12	2.00	3.00	1.75	2.00	2.50			3.00	4.00	4.0 MOD		3.00	3.50	4.00	5.00	24"	30"						
OPTION ITEMS																																			
STA. 11+57.0 LT.	R R	1	24.0	24.0	3.2						~~2~~ 1					X		X														W10-1		E-153B
17+47.00 RT.		1	30.0	30.0	6.3						1					X		X														W11-2 (FLUORESCENT YELLOW-GREEN SHEETING)		SHS
		1	24.0	12.0	2.0																											W16-7p (FLUORESCENT YELLOW-GREEN SHEETING)		SHS
17+58.16 LT.		1	30.0	30.0	6.3						1					X		X														W11-2 (FLUORESCENT YELLOW-GREEN SHEETING)		SHS
		1	24.0	12.0	2.0																											W16-7p (FLUORESCENT YELLOW-GREEN SHEETING)		SHS
17+74.05 LT.	NEWPORT	1					X				1					X		X														SALVAGE SIGN		
	MAIN STREET BUSINESS DISTRICT	1					X																									SALVAGE SIGN		
	WATERFRONT	1					X																									SALVAGE SIGN		
13+17.15 RT	NO SWIMMING/ NO DIVING	1					X																									SALVAGE SIGN - SEE NOTE #36 ON SHEET #3 OF 75		
17+77.15 RT	NO SWIMMING/ NO DIVING	1					X																									SALVAGE SIGN - SEE NOTE #36 ON SHEET #3 OF 75		
												FT	FT	FT	FT	FT	FT		EA	LB	LB	LB		LB	LB	LB	LB								
												.	.	.	.	73.			.	.	.	.		.	.	.	.								

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE VTRANS "SIGN POST DESIGN GUIDELINE."

	SF	SF	EA.	SF		FT	FT	LB	EA.	LB	EA.	EA.	LB
SUBTOTAL	19.8		5										
ROUNDING	0.2		0										
TOTALS	20.	.	5	.		.	73.	.		.	.	.	.

PROJECT NAME: **NEWPORT CITY**
PROJECT NUMBER: **BRO 1449 (25)**

FILE NAME: **96j314/str/96j314tss.dgn** PLOT DATE:
PROJECT MANAGER: **C. CARLSON** DRAWN BY: **L. BULLOCK**
DESIGNED BY: **D. PETERSON** CHECKED BY: **C. CARLSON**
TRAFFIC SIGN SUMMARY SHEET SHEET **18** OF **75**

SOIL CLASSIFICATION

AASHTO	
A1	Gravel and Sand
A3	Fine Sand
A2	Silty or Clayey Gravel and Sand
A4	Silty Soil - Low Compressibility
A5	Silty Soil - Highly Compressible
A6	Clayey Soil - Low Compressibility
A7	Clayey Soil - Highly Compressible

ROCK QUALITY DESIGNATION

R.Q.D. (%)	ROCK DESCRIPTION
<25	Very Poor
25 to 50	Poor
51 to 75	Fair
76 to 90	Good
>90	Excellent

SHEAR STRENGTH

UNDRAINED SHEAR STRENGTH IN P.S.F.	CONSISTENCY
<250	Very Soft
250-500	Soft
500-1000	Med. Stiff
1000-2000	Stiff
2000-4000	Very Stiff
>4000	Hard

CORRELATION GUIDE OF "N" TO DENSITY/CONSISTENCY

DENSITY (GRANULAR SOILS)		CONSISTENCY (COHESIVE SOILS)	
N	DESCRIPTIVE TERM	N	DESCRIPTIVE TERM
<5	Very Loose	<2	Very Soft
5-10	Loose	2-4	Soft
11-24	Med. Dense	5-8	Med. Stiff
25-50	Dense	9-15	Stiff
>50	Very Dense	16-30	Very Stiff
		31-60	Hard
		>60	Very Hard

COMMONLY USED SYMBOLS

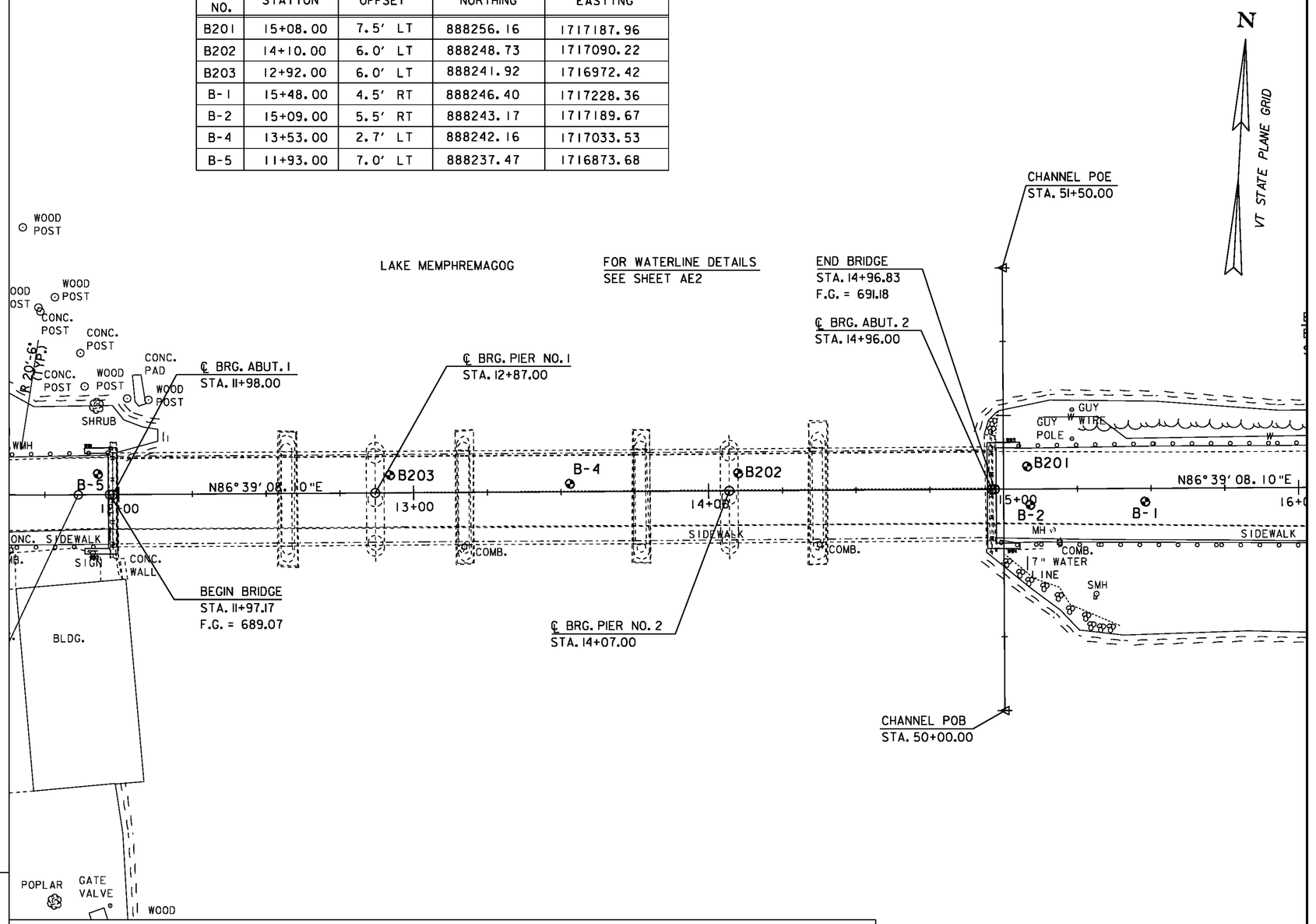
▼	Water Elevation
⊙	Standard Penetration Boring
⊕	Auger Boring
⊙	Rod Sounding
S	Sample
N	Standard Penetration Test Blow Count Per Foot For: 2" O.D. Sampler 1⅜" I.D. Sampler Hammer Weight Of 140 Lbs. Hammer Fall Of 30"
VS	Field Vane Shear Test
US	Undisturbed Soil Sample
B	Blast
DC	Diamond Core
MD	Mud Drill
WA	Wash Ahead
HSA	Hollow Stem Auger
AX	Core Size 1⅛"
BX	Core Size 1⅝"
NX	Core Size 2⅛"
M	Double Tube Core Barrel Used
LL	Liquid Limit
PL	Plastic Limit
PI	Plasticity Index
NP	Non Plastic
w	Moisture Content (Dry Wgt. Basis)
D	Dry
M	Moist
MTW	Moist To Wet
W	Wet
Sat	Saturated
Bo	Boulder
Gr	Gravel
Sa	Sand
Si	Silt
Cl	Clay
HP	Hardpan
Le	Ledge
NLTD	No Ledge To Depth
CNPF	Can Not Penetrate Further
TLOB	To Ledge Or Boulder
NR	No Recovery
Rec.	Recovery
%Rec.	Percent Recovery
RQD	Rock Quality Designation
CBR	California Bearing Ratio
<	Less Than
>	Greater Than
R	Refusal (N > 100)

COLOR

blk	Black	pnk	Pink
bl	Blue	pu	Purple
brn	Brown	rd	Red
dk	Dark	tn	Tan
gry	Gray	wh	White
gn	Green	yel	Yellow
lt	Light	mltc	Multicolored
or	Orange		

BORING CHART

HOLE NO.	STATION	OFFSET	NORTHING	EASTING
B201	15+08.00	7.5' LT	888256.16	1717187.96
B202	14+10.00	6.0' LT	888248.73	1717090.22
B203	12+92.00	6.0' LT	888241.92	1716972.42
B-1	15+48.00	4.5' RT	888246.40	1717228.36
B-2	15+09.00	5.5' RT	888243.17	1717189.67
B-4	13+53.00	2.7' LT	888242.16	1717033.53
B-5	11+93.00	7.0' LT	888237.47	1716873.68



SCALE 1" = 20'-0"
20 0 20

DEFINITIONS (AASHTO)

BEDROCK (LEDGE) - Rock in its native location of indefinite thickness.

BOULDER - A rock fragment with an average dimension > 12 inches.

COBBLE - Rock fragments with an average dimension between 3 and 12 inches.

GRAVEL - Rounded particles of rock < 3" and > 0.0787" (#10 sieve).

SAND - Particles of rock < 0.0787" (#10 sieve) and > 0.0029" (#200 sieve).

SILT - Soil < 0.0029" (#200 sieve), non or slightly plastic and exhibits no strength when air-dried.

CLAY - Fine grained soil, exhibits plasticity when moist and considerable strength when air-dried.

VARVED - Alternate layers of silt and clay.

HARDPAN - Extremely dense soil, cemented layer, not softened when wet.

MUCK - Soft organic soil (containing > 10% organic material.

MOISTURE CONTENT - Weight of water divided by dry weight of soil.

FLOWING SAND - Granular soil so saturated (loose) that it flows into drill casing during extraction of wash rod.

STRIKE - Angle from magnetic north to line of intersection of bed with a horizontal plane.

DIP - Inclination of bed with a horizontal plane.

GENERAL NOTES

1. The subsurface explorations, B-101,102,104 AND 105, shown herein were made between Nov. 2001 and Jan 2002 by the Agency.

   The subsurface explorations, B-201, 202, and 203, shown herein were made April 2008 by VTrans and observed by GeoDesign, Inc.

2. Soil and rock classifications, properties and descriptions are based on engineering interpretation from available subsurface information by the Agency and may not necessarily reflect actual variations in subsurface conditions that may be encountered between individual boring or sample locations.

3. Observed water levels and/or conditions indicated are as recorded at the time of exploration and may vary according to the prevailing rainfall, methods of exploration and other factors.

4. Engineering Judgment was exercised in preparing the subsurface information presented herein. Analysis and interpretation of subsurface data was performed and interpreted for Agency design and estimating purposes. Presentation of the information in the Contract is intended to provide the Contractor access to the same data available to the Agency.

   The subsurface information is presented in good faith and is not intended as a substitute for personal investigation, independent interpretation, independent analysis or judgment by the Contractor.

5. Pictorial structure details shown on the boring plan layout or soils profile are for illustrative purposes only and may not accurately portray final contract details.

6. Terminology used on boring logs to describe the hardness, degree of weathering, and spacing of fractures, joints and other discontinuities in the bedrock is defined in the AASHTO Manual on Subsurface Investigations, 1988.

PROJECT NAME: NEWPORT CITY

PROJECT NUMBER: BRO 1449(25)

FILE NAME: 96J314/STR/96J314bor.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
BORING INFORMATION SHEET

PLOT DATE: 22-NOV-2011
DRAWN BY: D. PETERSON
CHECKED BY: C. CARLSON
SHEET 19 OF 75

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH DIVISION
SUBSURFACE INFORMATION

HOLE NO.: B-1
SHEET 1 OF 2
DATE STARTED: 1/3/02
DATE COMPLETED: 1/4/02

PROJECT NAME: NEWPORT
SITE NAME: BR 9
STATION: 50' east of Abutment #2
GROUND EL.: 690.57

PROJECT NUMBER: BHO 1449 (25)
SITE NO.: MT. VERNON St.
OFFSET: 4.5' south of centerline
G.W. DEPTH: 7.0' 01/04/02

BORING CREW
CREW CHIEF: TALLMAN
DRILLER: TALLMAN
LOGGER: RUSSELL

BORING RIG: LARGE SKID RIG
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
		0.00'-0.80', Asphalt							
		A-1-b, Sa, brn-gry, Wet, Rec. = 1.25'	5	23.2	12.3	83.8	3.9		
5		A-1-b, SaGr, brn, Moist, Rec. = 0.40'	13	13.6	48.3	40	11.7		
▽		Visual Classification: Broken Stones, Rec. = 0.05'	13						
		A-2-4, GrSiSa, brn, Moist, Rec. = 0.60'	10	15.3	23.4	46.9	29.7		
10		Trace of brown sand, Not enough for a sample	7						
		A-2-4, SiGrSa, brn, Moist, Rec. = 0.30'	6	16.2	33.4	45.5	21.1		
		A-2-4, Sa, brn, Moist, Rec. = 0.35'	5	27.1	2.4	80.5	17.1		
15		A-4, SiSa, brn, Moist, Rec. = 0.60'	2	20.6	8.9	55.1	36		
		A-2-4, SiGrSa, brn, Moist, Rec. = 0.50'	2	16.3	29.1	43.2	27.7		
20		A-2-4, Sa, brn, Moist, Rec. = 0.40'	3	30.9	0.2	82.9	16.9		
		A-2-4, Sa, brn, Moist, Rec. = 0.75'	2	29.5	0.2	87.7	12.1		
25		A-2-4, SiSa, brn, Moist, Rec. = 1.00'	3	22.7	0.2	68.2	31.6		
		A-2-4, Sa, brn, Moist, Rec. = 0.90'	2	24.6		81.3	18.7		
		No Rec.	2						
30		A-2-4, SiSa, brn, Moist, Rec. = 1.20'	3	17.2	11.7	55.9	32.4		
35		A-1-b, GrSa, brn, Moist, Rec. = 0.45'	5	12.6	36.7	45.9	17.4		
40		A-1-b, GrSa, brn, Moist, Rec. = 0.30'	12	17.4	34.3	49.8	15.9		
45		A-1-a, SaGr, brn, Moist, Rec. = 0.50'	7	10.6	59.4	29.7	10.9		

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH DIVISION
SUBSURFACE INFORMATION

HOLE NO.: B-1
SHEET 2 OF 2
DATE STARTED: 1/3/02
DATE COMPLETED: 1/4/02

PROJECT NAME: NEWPORT
SITE NAME: BR 9
STATION: 50' east of Abutment #2
GROUND EL.: 690.57

PROJECT NUMBER: BHO 1449 (25)
SITE NO.: MT. VERNON St.
OFFSET: 4.5' south of centerline
G.W. DEPTH: 7.0' 01/04/02

BORING CREW
CREW CHIEF: TALLMAN
DRILLER: TALLMAN
LOGGER: RUSSELL

BORING RIG: LARGE SKID RIG
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
		Just a few small stones, No Rec.	8						
55	OR	A-4, Si with Trace of Organics (7.0%), gry, Moist, Rec. = 0.40', Possible gravel layer from 56.5'-58.0'.	15	52.4					
60		A-2-4, SiSa, Lt/gry, Moist, Rec. = 0.80'	11	30.6		68.1	31.9		
65		A-4, SaSi, gry, Moist, Rec. = 0.75'	9	19.7	13.2	23.4	63.4		
70		A-4, Si, gry, Moist, Rec. = 0.30'	9	29.8	0.3	2.5	97.2	26	4
		Hole stopped @ 72.0'							
75									
80									
85									
90									
95									

PROJECT NAME: NEWPORT CITY
PROJECT NUMBER: BRO 1449(25)

FILE NAME: 96j314/str/96j314bor.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: C. BENDA
BORING LOG 1

PLOT DATE: 22-NOV-2011
DRAWN BY: J. TOUCHETTE
CHECKED BY: C. BENDA
SHEET 20 OF 75

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH DIVISION
SUBSURFACE INFORMATION

HOLE NO.: B-2
SHEET 1 OF 3
DATE STARTED: 11/27/01
DATE COMPLETED: 12/5/01

PROJECT NAME: NEWPORT
SITE NAME: BR 9
STATION: 4.5' east of Abutment #2
GROUND EL.: 690.76

PROJECT NUMBER: BHO 1449 (25)
SITE NO.: MT. VERNON St.
OFFSET: 5.5' south of centerline
G.W. DEPTH:

BORING CREW
CREW CHIEF: TALLMAN
DRILLER: TALLMAN
LOGGER: RUSSELL

BORING RIG: LARGE SKID RIG
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL

BOTTOM OF ABUTMENT NO. 2 ELEVATION 681.00

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
		0.0'-1.1', Asphalt							
	CONCRE	1.1'-3.25', Concrete							
5		Visual Class: Possible Stone Fill, gry, Moist, Rec. = 0.20'	6	3.4					
	▽	A-1-a, SaGr, brn, Wet, Rec. = 0.50'	10	9.7	71.2	21.5	7.3		
		A-2-4, SaSiGr, brn, Wet, Rec. = 0.60'	8	14.6	35.5	32	32.5		
10		A-1-a, Gr, brn, Moist, Rec. = 0.10'	15	7	76.1	18.7	5.2		
		12.0'-14.0', No Rec.	34						
15		A-1-b, GrSa, brn, Wet, Rec. = 0.60'	11	13.4	33.2	52.1	14.7		
		A-1-a, Gr, gry, Moist, Rec. = 0.20'	14	4.3	93.3	5.8	0.9		
		A-1-b, SiSaGr, brn, Moist, Rec. = 0.70'	10	12.3	48.4	30.5	21.1		
20		20.0'-22.0', No Rec.	7						
		A-2-4, GrSiSa, brn, Moist, Rec. = 0.50'	7	15.3	25.8	45	29.2		
25		A-2-4, SiGrSa, brn, Moist, Rec. = 0.50'	4	14.4	24	55.4	20.6		
		A-2-4, GrSiSa, brn, Wet, Rec. = 0.40'	6	26.8	20.5	57.2	22.3		
		A-2-4, SiSa, brn, Moist, Rec. = 1.00'	3	19.7	11.2	58.6	30.2		
30		A-2-4, SiSa, gry-brn, Moist, Rec. = 0.20'	4	23.3	4.3	74.7	21		
35		A-2-4, Sa, brn-gry, Moist, Rec. = 0.45'	7	25.1	0.8	84.5	14.7		
40		A-1-b, GrSa, brn-gry, Moist, Rec. = 1.0'	12	19.9	34.1	56.9	9		
45		A-1-a, Gr, gry, Moist, Rec. = 0.25'	26	5.8	96.5	1.3	2.2		
		Material appears to have changed @ 48.0'.							

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH DIVISION
SUBSURFACE INFORMATION

HOLE NO.: B-2
SHEET 2 OF 3
DATE STARTED: 11/27/01
DATE COMPLETED: 12/5/01

PROJECT NAME: NEWPORT
SITE NAME: BR 9
STATION: 4.5' east of Abutment #2
GROUND EL.: 690.76

PROJECT NUMBER: BHO 1449 (25)
SITE NO.: MT. VERNON St.
OFFSET: 5.5' south of centerline
G.W. DEPTH:

BORING CREW
CREW CHIEF: TALLMAN
DRILLER: TALLMAN
LOGGER: RUSSELL

BORING RIG: LARGE SKID RIG
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
	OR	A-4, Si with Trace of Organics (7.4%), gry, Moist, Rec. = 1.60'	3	80.6	0.3	6	93.7		
55	OR	A-4, Si with Trace of Organics (4.4%), gry, Moist, Rec. = 0.08'	12	58.8					
60		A-1-b, GrSa, gry, Moist, Rec. = 0.85', Some wood particles within sample.	20	17.3	36.6	53.8	9.6		
65		65.0'-67.0', No Rec., Stone in end of sampler.	31						
70		A-4, Si, gry, Moist, Rec. = 0.15'	21	27.8		2.4	97.6		
75		A-4, Si, gry, Wet, Rec. = 0.25'	13	26.7	0.3	5.6	94.1		
80		BXDMDC, 79.0'-80.5', Boulder							
		No sample, Pulled casing @ 80.5', Changed bit.							
85		A-1-b, SaGr, gry, Wet, Rec. = 0.50'	10	13.4	44.1	39.4	16.5		
90		BXMDC, 88.5'-90.5', Boulder, No Sample							
95		95.0'-97.0', No Rec.	32						

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH DIVISION
SUBSURFACE INFORMATION

HOLE NO.: B-2
SHEET 3 OF 3
DATE STARTED: 11/27/01
DATE COMPLETED: 12/5/01

PROJECT NAME: NEWPORT
SITE NAME: BR 9
STATION: 4.5' east of Abutment #2
GROUND EL.: 690.76

PROJECT NUMBER: BHO 1449 (25)
SITE NO.: MT. VERNON St.
OFFSET: 5.5' south of centerline
G.W. DEPTH:

BORING CREW
CREW CHIEF: TALLMAN
DRILLER: TALLMAN
LOGGER: RUSSELL

BORING RIG: LARGE SKID RIG
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
		A-2-4, SiSaGr, gry, Moist, Rec. = 0.90'	38	11	41.5	31.1	27.4		
105		Visual Classification: Various Broken Stone gry, Moist, Rec. = 0.20'	R						
110		No Rec. No Sample, Possible boulders or cobbles from 110.0'-115.0'	R						
115		BXGDC, 115.0'-120.0', Visual Class: Various Cobbles and Boulders Rec. = 0.10'							
120		Visual Class: Various Broken Stone, Rec. = 0.15'	R						
		Hole stopped @ 120.45'							
125		Driller's Notes:							
		1. Various seams encountered between 105.0' and 117.0'							
130									
135									
140									
145									

ESTIMATED PILE TIP ELEVATION 544.00

PROJECT NAME: NEWPORT CITY
PROJECT NUMBER: BRO 1449(25)

FILE NAME: 96J314/str/96J314bor.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: C. BENDA
BORING LOG 2

PLOT DATE: 22-NOV-2011
DRAWN BY: J. TOUCHETTE
CHECKED BY: C. BENDA
SHEET 21 OF 75

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH DIVISION
SUBSURFACE INFORMATION

HOLE NO.: B-4
SHEET 1 OF 3
DATE STARTED: 1/8/02
DATE COMPLETED: 1/23/02

PROJECT NAME: NEWPORT
SITE NAME: BR 9
STATION: 152.3' East of West Abutment
BRIDGE DECK EL.: 690.13
PROJECT NUMBER: BHO 1449 (25)
SITE NO.: MT. VERNON St.
OFFSET: 2.7' North of Centerline
G.W. DEPTH: 9.25 01/24/02

BORING CREW
CREW CHIEF: TALLMAN
DRILLER: TALLMAN
LOGGER: RUSSELL
BORING RIG: LARGE SKID RIG
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
	CONCRE	Top of Bridge Deck 0.0'-0.18', Asphalt 0.18'-0.85', Concrete							
5									
	▽	Lake water @ 9.25' from top of Bridge deck							
10									
15									
20									
25									
30		Lake bottom @ 31.0'							
35									
40		40.0'-42.0', Muck, No Sample	WH						
45									

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH DIVISION
SUBSURFACE INFORMATION

HOLE NO.: B-4
SHEET 2 OF 3
DATE STARTED: 1/8/02
DATE COMPLETED: 1/23/02

PROJECT NAME: NEWPORT
SITE NAME: BR 9
STATION: 152.3' East of West Abutment
BRIDGE DECK EL.: 690.13
PROJECT NUMBER: BHO 1449 (25)
SITE NO.: MT. VERNON St.
OFFSET: 2.7' North of Centerline
G.W. DEPTH: 9.25 01/24/02

BORING CREW
CREW CHIEF: TALLMAN
DRILLER: TALLMAN
LOGGER: RUSSELL
BORING RIG: LARGE SKID RIG
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
55		No Rec.	2						
60		A-1-b, GrSa, gry, Moist, Rec. = 0.15'	28	17.5	24.2	61.4	14.4		
65		A-4, GrSaSi, gry, Moist, Rec. = 0.10'	24	15.3	26	30.4	43.6		
		BXDC, 67.0'-69.5', Boulders & Cobbles Cleaned out casing.							
70		Visual Class: A-2-4, GrSiSa, gry, Moist, Rec. = 0.15'	18						
75		Trace of gray sand, Insufficient sample.	16						
80		No Rec.	17						
85		A-4, Si, gry, Moist, Rec. = 1.0'	21	25.8	0.1	1.1	98.8		
90		A-4, Si, gry, Moist, Rec. = 0.9'	12	27.7	0.8	2.9	96.3		
95		A-4, Si, gry, Moist, Rec. = 0.7'	12	29.4	3.4	2.4	94.2		

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH DIVISION
SUBSURFACE INFORMATION

HOLE NO.: B-4
SHEET 3 OF 3
DATE STARTED: 1/8/02
DATE COMPLETED: 1/23/02

PROJECT NAME: NEWPORT
SITE NAME: BR 9
STATION: 152.3' East of West Abutment
BRIDGE DECK EL.: 690.13
PROJECT NUMBER: BHO 1449 (25)
SITE NO.: MT. VERNON St.
OFFSET: 2.7' North of Centerline
G.W. DEPTH: 9.25 01/24/02

BORING CREW
CREW CHIEF: TALLMAN
DRILLER: TALLMAN
LOGGER: RUSSELL
BORING RIG: LARGE SKID RIG
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
		A-4, SaSi, gry, Moist, Rec. = 0.8'	17	23.5	4.2	29.1	66.7		
105		A-4, Si, gry, Moist, Rec. = 0.9'	28	22.3	2.3	9.1	88.6		
110		A-4, SaSi, gry, Moist, Rec. = 0.7'	32	23.7	1.3	20.1	78.6		
115		A-4, SiSa, gry, Moist, Rec. = 1.2'	49	11	15.1	43.1	41.8		
120		Visual Class: Broken cobble	71						
125		No Sample							
130		A-4, SaSi HP, gry, Moist, Rec. = 0.5' Appears to be (HP) 130.5'-134.0'	R	12.5	9.7	25.7	64.6		
135		No Rec., Casing plugged up.	R						
		BXDC, 136.0'-138.0', Various types of small broken stones.	R						
140		Sampled at 138.0'-138.25' Rec.= 0.15', Small broken stones. Refusal at 3".	Hole stopped @ 138.25'						
145									

PROJECT NAME: NEWPORT CITY
PROJECT NUMBER: BRO 1449(25)

FILE NAME: 96J314/str/96J314bor.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: C. BENDA
BORING LOG 3
PLOT DATE: 22-NOV-2011
DRAWN BY: J. TOUCHETTE
CHECKED BY: C. BENDA
SHEET 22 OF 75

BOTTOM OF ABUTMENT NO. 1, ELEVATION 679.00

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH DIVISION
SUBSURFACE INFORMATION

HOLE NO.: B-5
SHEET 1 OF 4
DATE STARTED: 12/10/01
DATE COMPLETED: 1/2/02

PROJECT NAME: NEWPORT
SITE NAME: BR 9
STATION: 3.0' west of Abutment #1
GROUND EL.: 688.44

PROJECT NUMBER: BHO 1449 (25)
SITE NO.: MT. VERNON St.
OFFSET: 7.0' north of centerline
G.W. DEPTH: 7.6

BORING CREW
CREW CHIEF:
DRILLER: TALLMAN
LOGGER: RUSSELL

BORING RIG: LARGE SKID RIG
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
	CONCRE	0.0'-0.45', Asphalt 0.45'-1.80', Concrete							
		A-1-a, SaGr, brn, Moist, Rec. = 0.25'	8	12.3	52.7	39.8	7.5		
5		Visual Class: Possible Gravel, Rec. = 0.10'	11						
		A-1-a, SaGr with broken concrete,gry,Moist, Rec. = 0.90'	12	15.8	56.2	32.9	10.9		
		No Sample, Into Rock							
10		Visual Class: Wood with trace of Gravel, Rec. = 0.20' 11.25', Pulled casing, Changed to sawtooth bit.	R						
		A-1-b, Sa, gry, Moist, Rec. = 0.90'	3	29.9	5.3	90.8	3.9		
15		A-1-b, Sa, gry, Moist, Rec. = 0.50'	3	22.5	4.1	91.5	4.4		
		A-1-b, Sa, gry, Wet, Rec. = 0.15'	3	21.9	12	82	6		
20		A-1-b, Sa, gry, Moist, Rec. = 0.35'	3	23.1	4	93.9	2.1		
		A-1-b, Sa, gry, Moist, Rec. = 1.20'	2	22.9	4	91	5		
25		A-1-b, Sa, gry, Moist, Rec. = 0.45'	2	23.7	3.9	91.9	4.2		
		A-1-b, Sa, gry, Moist, Rec. = 0.75'	3	20.6	7.5	85.3	7.2		
		A-1-b, Sa, gry, Moist, Rec. = 0.80'	3	24.7	2.2	93	4.8		
30		A-1-b, Sa, gry, Moist, Rec. = 0.70'	3	25.8	11	81.8	7.2		
	OR	A-4, SaSi with Trace of Organics (5.6%), gry, Moist, Rec. = 0.40'		46.1	0.7	46.5	52.8		
35	OR	A-4, Si with Trace of Organics (9.2%), gry, Moist, Rec. = 2.00'	3	61		9	91		
40	OR	A-4, Si with Trace of Organics (7.9%), gry, Moist, Rec. = 2.00'	2	66.3		9.1	90.9		
45		A-4, SaSi, gry, Moist, Rec. = 0.90'	10	48.5		24.5	75.5		
		A-2-4, Sa, gry, Moist, Rec. = 0.80'		24.4	0.1	83.3	16.6		

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH DIVISION
SUBSURFACE INFORMATION

HOLE NO.: B-5
SHEET 2 OF 4
DATE STARTED: 12/10/01
DATE COMPLETED: 1/2/02

PROJECT NAME: NEWPORT
SITE NAME: BR 9
STATION: 3.0' west of Abutment #1
GROUND EL.: 688.44

PROJECT NUMBER: BHO 1449 (25)
SITE NO.: MT. VERNON St.
OFFSET: 7.0' north of centerline
G.W. DEPTH: 7.6

BORING CREW
CREW CHIEF: TALLMAN
DRILLER: TALLMAN
LOGGER: RUSSELL

BORING RIG: LARGE SKID RIG
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
		Visual Class: A-2-4, SiSa, gry, Moist, Rec. 0.15'	12						
55		A-1-a, SaGr, gry, Moist, Rec. = 0.45'	22	9.7	63	31.2	5.8		
60		A-4, GrSi, gry, Moist, Rec. = 0.50'	17	18.1	23.2	13.5	63.3		
65		A-4, SaSi, gry, Moist, Rec. = 2.00'	3	22.4	0.5	27.8	71.7		
70		A-4, SiSa, gry, Moist, Rec. = 1.65'	17	20.9	0.1	60	39.9		
75		A-1-a, Gr, gry, Moist, Rec. = 0.90'	34	7.1	75.1	18.3	6.6		
80		A-1-a, SaGr, gry, Moist, Rec. = 0.60'	23	16.6	51.5	45.7	2.8		
85		85.0'-87.0', Not enough Rec., A few small stones	14						
90		Visual Class: A-4, Si, gry, Moist, Minimal Recovery	29						
95		A-4, Si, gry, Moist, Rec. = 1.40'	14	28.3		1.2	98.8		

ESTIMATED PILE TIP ELEVATION 544.00

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH DIVISION
SUBSURFACE INFORMATION

HOLE NO.: B-5
SHEET 3 OF 4
DATE STARTED: 12/10/01
DATE COMPLETED: 1/2/02

PROJECT NAME: NEWPORT
SITE NAME: BR 9
STATION: 3.0' west of Abutment #1
GROUND EL.: 688.44

PROJECT NUMBER: BHO 1449 (25)
SITE NO.: MT. VERNON St.
OFFSET: 7.0' north of centerline
G.W. DEPTH: 7.6

BORING CREW
CREW CHIEF: TALLMAN
DRILLER: TALLMAN
LOGGER: RUSSELL

BORING RIG: LARGE SKID RIG
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
		A-4, Si, gry, Moist, Rec. = 1.30'	17	29.5		1.7	98.3		
105		A-4, Si, gry, Moist, Rec. = 1.00'	26	23.8		15.6	84.4		
110		A-4, SaSi, gry, Moist, Rec. = 1.20'	38	21.7		23.2	76.8		
115		A-4, Si, gry, Moist, Rec. = 0.45'	35	23.4		11.9	88.1		
120		A-4, Si, gry, Moist, Rec. = 0.70'	30	23.6		6.8	93.2		
125		A-4, Si, gry, Moist, Rec. = 0.50'	32	25.8		3.8	96.2		
130		A-4, Si, gry, Moist, Rec. = 0.60'	38	23.9	0.8	5.6	93.6		
135		135.0'-137.0', No Sample							
		138.0'-138.5', No Rec. Poss. boulders/cobbles	R						
140		140.'-145.0', BXGDC, Various types of rock, Rec. = 1.20'							
145		145.0'-145.5', No Rec.	R						

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH DIVISION
SUBSURFACE INFORMATION

HOLE NO.: B-5
SHEET 4 OF 4
DATE STARTED: 12/10/01
DATE COMPLETED: 1/2/02

PROJECT NAME: NEWPORT
SITE NAME: BR 9
STATION: 3.0' west of Abutment #1
GROUND EL.: 688.44

PROJECT NUMBER: BHO 1449 (25)
SITE NO.: MT. VERNON St.
OFFSET: 7.0' north of centerline
G.W. DEPTH: 7.6

BORING CREW
CREW CHIEF: TALLMAN
DRILLER: TALLMAN
LOGGER: RUSSELL

BORING RIG: LARGE SKID RIG
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL

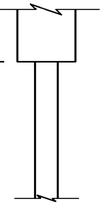
DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
		150.0'-152.0', No Rec. Possible boulders	R						
		152.0'-153.5', Out of rock.							
155		153.5'-155.0', No Sample Possible boulders							
		BXGDC, 155.0'-160.0', Rec. 1.10', Small stones and granite boulder, Into silt material at 158.0', Casing bit wore out at 155 feet.							
160		Hole stopped @ 160.0'							
165									
170									
175									
180									
185									
190									
195									

PROJECT NAME: NEWPORT CITY
PROJECT NUMBER: BRO 1449(25)

FILE NAME: 96J314/str/96J314bor.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: C. BENDA
BORING LOG 4

PLOT DATE: 22-NOV-2011
DRAWN BY: J. TOUCHETTE
CHECKED BY: C. BENDA
SHEET 23 OF 75

BOTTOM OF
ABUTMENT NO. 2
ELEVATION 681.00



GEODESIGN INCORPORATED
Geotechnical Engineers and Environmental Consultants
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Middlebury, Connecticut 06762
Telephone: 203-758-8836 Fax: 203-758-8842

BORING LOG

Project Name: Mount Vernon Street Bridge (BHI), Newport, Vermont

Boring No.: B-201 | Page No.: 1 of 6 | File No.: 0750-005.6 | Checked By: JWK

Boring Company: VTRANS | Foreman: Glen Porter | GeoDesign Rep.: Ray Underwood | Date Started: Apr. 18, 2008 | Date Finished: April 23, 2008 | N. Coordinate: | E. Coordinate: | Ground Surface Elevation (feet): 660.7 | Station: 15+08 | Offset: 7.5 ft North

Casing: Type: HW/NW; I.D.: 4.0"/3.0" in. | Hammer Wt.: N/A; 140 lbs | Hammer Fall: N/A; 30 in. | Rig Type: CME 55 | Hammer Type: Auto

Sampler: SS; 1.38 in.

Groundwater Observations

Date	Depth (ft)	Elev. (ft)	Notes
4/18/08	9.8	650.9	
4/23/08	9.8	650.9	

Depth (ft)	Casing Blowsft	Sample Number	Sample Type	Sample Penetration (inches)	Sample Recovery (inches)	Sample Depth (ft)	Blows / 6 inch Interval 0 - 6	6 - 12	12 - 18	18 - 24	Coring Time (min./ft)	Moisture Content (%)	Strata Description Depth & Elevation (feet)	Symbol	Sample Description Classification System: Burmister
													Asphalt 660.2		
													1.5 Concrete 658.7		
													3.5 Sand 657.2		Loose, brown, fine to coarse SAND and fine to coarse GRAVEL, trace Silt, (wet)
5		1	SS	24	9	5.0	4	6	5	4					
10		2	SS	24	9	10.0	3	3	2	2					Loose, brown, fine to coarse SAND, some Silt, little fine to coarse Gravel, (moist)
15		3	SS	24	3	15.0	2	3	1	3					Very loose, brown, fine to coarse SAND, little Silt, little fine Gravel, (moist)
20		4	SS	24	3	20.0	6	3	2	3					Loose, brown, fine to coarse SAND, some fine Gravel, little Silt, (moist)
25		5	SS	24	9	25.0	7	6	1	1					Loose, brown, fine to coarse SAND, some Silt, little fine Gravel, (moist)
30															

Remarks: Pilot hole from 0 to 4 feet drilled on 4/7/08 and backfilled with sand prior to drilling boring.
HW casing used from 0 to 2 feet; NW casing from approximately 2 feet to bottom of boring.

Notes: 1) Stratification lines represent approximate boundary between material types, transitions may be gradual.
2) Water level readings have been made at times and under conditions stated, fluctuations of groundwater may occur due to other factors than those present at the time measurements were made. AC = After coring; NR = Not Recorded.
3) Abbreviations: A = Auger; C = Core; D = Driven; G = Grab; PS = Piston Sample; SS = Split Spoon; SSL = 3.5 Inch ID Split Spoon; ST = Shelby Tube; V = Vane; WOR/H = Weight of Rod/Hammer
4) Proportions Used: Trace = 1-10%; Little = 10-20%; Some = 20-35%; And = 35-50%

Boring No.: B-201

BORING LOG NO 12/19/03 750-005.6.GPJ GEODESIGN STANDARD .GDT 9/30/08

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Telephone: 203-758-8836 Fax: 203-758-8842

BORING LOG

Project Name: Mount Vernon Street Bridge (BHI), Newport, Vermont

Boring No.: B-201 | Page No.: 2 of 6 | File No.: 0750-005.6 | Checked By: JWK

Boring Company: VTRANS | Foreman: Glen Porter | GeoDesign Rep.: Ray Underwood | Date Started: April 18, 2008 | Date Finished: April 23, 2008 | N. Coordinate: | E. Coordinate: | Ground Surface Elevation (feet): 660.7 | Station: 15+08 | Offset: 7.5 ft North

Casing: Type: HW/NW; I.D.: 4.0"/3.0" in. | Hammer Wt.: N/A; 140 lbs | Hammer Fall: N/A; 30 in. | Rig Type: CME 55 | Hammer Type: Auto

Sampler: SS; 1.38 in.

Groundwater Observations

Date	Depth (ft)	Elev. (ft)	Notes
4/18/08	9.8	650.9	
4/23/08	9.8	650.9	

Depth (ft)	Casing Blowsft	Sample Number	Sample Type	Sample Penetration (inches)	Sample Recovery (inches)	Sample Depth (ft)	Blows / 6 inch Interval 0 - 6	6 - 12	12 - 18	18 - 24	Coring Time (min./ft)	Moisture Content (%)	Strata Description Depth & Elevation (feet)	Symbol	Sample Description Classification System: Burmister
		6	SS	24	0	30.0	3	2	2	2			Sand (Continued)		No recovery
35		7	SS	24	0	35.0	19	6	3	16					No recovery
40		8	SS	24	6	40.0	2	2	1/12"						Very loose, brown, fine to coarse SAND, little Silt, trace fine Gravel, (moist)
45		9	SS	24	4	45.0	2	2	1	1					Very loose, brown, fine to coarse SAND, some fine to coarse Gravel, little Silt, (moist)
50		10	SS	24	6	50.0	7	6	2	4			50.0 Silt 637.7		Loose, brown fine to medium SAND and SILT, some fine to coarse Gravel, (moist)
55		11	SS	24	1	55.0	8	3	8	10			60.0		Medium dense, gray SILT, little fine to coarse Sand, (wet)
60															

Remarks: Cobble encountered at approximately 37.8 feet.
Top of natural silt layer inferred at approximately 53 feet based on increased resistance on casing drilling advancement.

Notes: 1) Stratification lines represent approximate boundary between material types, transitions may be gradual.
2) Water level readings have been made at times and under conditions stated, fluctuations of groundwater may occur due to other factors than those present at the time measurements were made. AC = After coring; NR = Not Recorded.
3) Abbreviations: A = Auger; C = Core; D = Driven; G = Grab; PS = Piston Sample; SS = Split Spoon; SSL = 3.5 Inch ID Split Spoon; ST = Shelby Tube; V = Vane; WOR/H = Weight of Rod/Hammer
4) Proportions Used: Trace = 1-10%; Little = 10-20%; Some = 20-35%; And = 35-50%

Boring No.: B-201

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Telephone: 203-758-8836 Fax: 203-758-8842

BORING LOG

Project Name: Mount Vernon Street Bridge (BHI), Newport, Vermont

Boring No.: B-201 | Page No.: 3 of 6 | File No.: 0750-005.6 | Checked By: JWK

Boring Company: VTRANS | Foreman: Glen Porter | GeoDesign Rep.: Ray Underwood | Date Started: April 18, 2008 | Date Finished: April 23, 2008 | N. Coordinate: | E. Coordinate: | Ground Surface Elevation (feet): 660.7 | Station: 15+08 | Offset: 7.5 ft North

Casing: Type: HW/NW; I.D.: 4.0"/3.0" in. | Hammer Wt.: N/A; 140 lbs | Hammer Fall: N/A; 30 in. | Rig Type: CME 55 | Hammer Type: Auto

Sampler: SS; 1.38 in.

Groundwater Observations

Date	Depth (ft)	Elev. (ft)	Notes
4/18/08	9.8	650.9	
4/23/08	9.8	650.9	

Depth (ft)	Casing Blowsft	Sample Number	Sample Type	Sample Penetration (inches)	Sample Recovery (inches)	Sample Depth (ft)	Blows / 6 inch Interval 0 - 6	6 - 12	12 - 18	18 - 24	Coring Time (min./ft)	Moisture Content (%)	Strata Description Depth & Elevation (feet)	Symbol	Sample Description Classification System: Burmister
		12	SS	24	7	60.0	1	2	4	9			Sand 600.7		Loose, dark gray (white to black grains), fine to medium SAND, trace Silt, trace fine Gravel, (moist)
		13	SS	24	8	62.0	22	13	8	9			62.0 Silt 598.7		Medium dense, gray SILT, some fine to coarse Gravel, trace fine to coarse Sand, (moist)
65		14	SS	24	0	64.0	4	7	5	7					No recovery
		15	SS	24	0	66.0	5	6	5	7					No recovery
		16	SS	24	6	68.0	12	13	3	6					Medium dense, gray fine to coarse GRAVEL and SILT, little fine to coarse Sand, (wet)
70		17	SS	24	0	70.0	11	5	3	5					No recovery
		18	SS	24	12	72.0	12	5	3	3					Loose, gray SILT, some fine Sand, trace fine Gravel, (moist)
75		19	SS	24	8	74.0	3	6	6	5					Medium dense, gray SILT, some fine Sand, trace fine Gravel, (moist)
80		20	SS	24	13	80.0	4	6	6	7			85.0 Gravel 605.7		Medium dense, gray SILT, little fine to coarse Sand, trace fine Gravel, (moist)
85		21	SS	24	4	85.0	5	3	8	8					Medium dense, gray fine to coarse GRAVEL, some Silt, some fine to coarse Sand, (moist)
90															

Remarks:

Notes: 1) Stratification lines represent approximate boundary between material types, transitions may be gradual.
2) Water level readings have been made at times and under conditions stated, fluctuations of groundwater may occur due to other factors than those present at the time measurements were made. AC = After coring; NR = Not Recorded.
3) Abbreviations: A = Auger; C = Core; D = Driven; G = Grab; PS = Piston Sample; SS = Split Spoon; SSL = 3.5 Inch ID Split Spoon; ST = Shelby Tube; V = Vane; WOR/H = Weight of Rod/Hammer
4) Proportions Used: Trace = 1-10%; Little = 10-20%; Some = 20-35%; And = 35-50%

Boring No.: B-201

PROJECT NAME:	NEWPORT CITY
PROJECT NUMBER:	BRO 1449(25)
FILE NAME: 96J314/str/96J314bor.dgn	PLOT DATE: 22-NOV-2011
PROJECT LEADER: C. CARLSON	DRAWN BY: J. TOUCHETTE
DESIGNED BY: C. BENDA	CHECKED BY: C. BENDA
BORING LOG 5	SHEET 24 OF 75

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BORING LOG

Project Name: Mount Vernon Street Bridge (BHI)
Newport, Vermont

Boring No.: B-201
Page No.: 4 of 6
File No.: 0750-005.6
Checked By: JWK

Boring Company: VTRANS
Foreman: Glen Porter
GeoDesign Rep.: Ray Underwood
Date Started: April 18, 2006 Date Finished: April 20, 2006
N. Coordinate: E. Coordinate:
Ground Surface Elevation (feet): 690.7
Station: 15+08 Offset: 7.5 ft North

Casing: Type: HW/NW; I.D.: 4.0"/3.0" in.; Hammer Wt.: N/A; Hammer Fall: N/A; Rig Type: CME 55; Hammer Type: Auto
Sampler: SS; I.D.: 1.38 in.; 140 lbs.; 30 in.

Groundwater Observations

Date	Depth (ft)	Elev. (ft)	Notes
4/19/06	9.8	680.9	
4/20/06	9.8	680.9	

Depth (ft)	Casing Blows/ft	Sample Information: Number	Type	Penetration (inches)	Recovery (inches)	Depth (ft)	Blows / 6 inch Interval: 0 - 6	6 - 12	12 - 18	18 - 24	Coring Time (min./ft)	Moisture Content (%)	Strata Description: Depth & Elevation(feet)	Symbol	Sample Description: Classification System: Burmister
		22	SS	24	9	90.0	16	23	37	38			Gravel (Continued)		No recovery
95													95.0		
		23	SS	24	12	95.0							Silt 595.7		Gray SILT, trace fine Sand, (moist)
100		24	SS	24	15	100.0	4	6	12	18			102.0		Medium dense, gray SILT, trace fine Sand, (moist)
													Glacial Till 588.7		
105															Very dense, gray fine to medium SAND, little Silt, little fine to coarse Gravel, (moist)
110		26	SS	5	0	110.0	75/5"								No recovery
115		27	SS	9	4	115.0	129								Very dense, gray fine to coarse SAND, some Silt, little fine Gravel, (moist)
120															

Remarks: For sample S-23 standard split spoon sampler not used.
Top of glacial till inferred at approximately102 feet due to increased drilling effort.

Notes: 1) Stratification lines represent approximate boundary between material types, transitions may be gradual.
2) Water level readings have been made at times and under conditions stated, fluctuations of groundwater may occur due to other factors than those present at the time measurements were made. AC = After coring; NR = Not Recorded.
3) Abbreviations: A = Auger; C = Core; D = Driven; G = Grab; PS = Piston Samples; SS = Split Spoon; SSL = 3.5 Inch ID Split Spoon; ST = Shelby Tube; V = Vane; WOR/PR = Weight of Rod/Hammer
4) Proportions Used: Trace = 1-10%; Little = 10-20%; Some = 20-35%; And = 35-50%

Boring No.: B-201

ESTIMATED PILE TIP ELEVATION 544.00

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BORING LOG

Project Name: Mount Vernon Street Bridge (BHI)
Newport, Vermont

Boring No.: B-201
Page No.: 5 of 6
File No.: 0750-005.6
Checked By: JWK

Boring Company: VTRANS
Foreman: Glen Porter
GeoDesign Rep.: Ray Underwood
Date Started: April 18, 2006 Date Finished: April 20, 2006
N. Coordinate: E. Coordinate:
Ground Surface Elevation (feet): 690.7
Station: 15+08 Offset: 7.5 ft North

Casing: Type: HW/NW; I.D.: 4.0"/3.0" in.; Hammer Wt.: N/A; Hammer Fall: N/A; Rig Type: CME 55; Hammer Type: Auto
Sampler: SS; I.D.: 1.38 in.; 140 lbs.; 30 in.

Groundwater Observations

Date	Depth (ft)	Elev. (ft)	Notes
4/19/06	9.8	680.9	
4/20/06	9.8	680.9	

Depth (ft)	Casing Blows/ft	Sample Information: Number	Type	Penetration (inches)	Recovery (inches)	Depth (ft)	Blows / 6 inch Interval: 0 - 6	6 - 12	12 - 18	18 - 24	Coring Time (min./ft)	Moisture Content (%)	Strata Description: Depth & Elevation(feet)	Symbol	Sample Description: Classification System: Burmister
		29	SS	4	0	123.0	70/4"						Glacial Till (Continued)		No recovery
125		29	SS	2	0	125.0	70/2"								No recovery
130		30	SS	18	18	130.5	14	43	54						Very dense, gray SILT and fine to medium SAND, trace fine to coarse Gravel, (moist)
135		31	SS	14.5	11	135.0	20/5"	80	50/2.5"						Very dense, gray fine to medium SAND, some Silt, little fine Gravel, (moist)
140		32	SS	11	8	140.0	2	804.5"							Very dense, gray fine to medium SAND and SILT, trace fine Gravel
145		33	SS	16	13	145.0	17	80	50/3"						Very dense, gray fine to medium SAND and SILT, little fine to coarse Gravel, (moist)
150															

Remarks:

Notes: 1) Stratification lines represent approximate boundary between material types, transitions may be gradual.
2) Water level readings have been made at times and under conditions stated, fluctuations of groundwater may occur due to other factors than those present at the time measurements were made. AC = After coring; NR = Not Recorded.
3) Abbreviations: A = Auger; C = Core; D = Driven; G = Grab; PS = Piston Samples; SS = Split Spoon; SSL = 3.5 Inch ID Split Spoon; ST = Shelby Tube; V = Vane; WOR/PR = Weight of Rod/Hammer
4) Proportions Used: Trace = 1-10%; Little = 10-20%; Some = 20-35%; And = 35-50%

Boring No.: B-201

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BORING LOG

Project Name: Mount Vernon Street Bridge (BHI)
Newport, Vermont

Boring No.: B-201
Page No.: 6 of 6
File No.: 0750-005.6
Checked By: JWK

Boring Company: VTRANS
Foreman: Glen Porter
GeoDesign Rep.: Ray Underwood
Date Started: April 18, 2006 Date Finished: April 20, 2006
N. Coordinate: E. Coordinate:
Ground Surface Elevation (feet): 690.7
Station: 15+08 Offset: 7.5 ft North

Casing: Type: HW/NW; I.D.: 4.0"/3.0" in.; Hammer Wt.: N/A; Hammer Fall: N/A; Rig Type: CME 55; Hammer Type: Auto
Sampler: SS; I.D.: 1.38 in.; 140 lbs.; 30 in.

Groundwater Observations

Date	Depth (ft)	Elev. (ft)	Notes
4/19/06	9.8	680.9	
4/20/06	9.8	680.9	

Depth (ft)	Casing Blows/ft	Sample Information: Number	Type	Penetration (inches)	Recovery (inches)	Depth (ft)	Blows / 6 inch Interval: 0 - 6	6 - 12	12 - 18	18 - 24	Coring Time (min./ft)	Moisture Content (%)	Strata Description: Depth & Elevation(feet)	Symbol	Sample Description: Classification System: Burmister
		34	SS	4	4	150.0	69/4"						Glacial Till (Continued)		Very dense, gray fine to coarse SAND, some fine Gravel, some Silt, (moist)
155		35	SS	5	2	155.0	89/5"								Very dense, gray SILT and fine to coarse SAND, trace fine Gravel, (moist)
160		36	SS	7	2.5	160.5	54	50/1"							Very dense, gray fine to coarse SAND and SILT, some fine to coarse Gravel, (moist)
165		37	SS	24	19	165.0	17/4	38	47	80					Very dense, gray SILT, some fine to medium Sand, trace fine Gravel, (moist)
													167.0 Bottom of Exploration at 167.0 ft	522.7	
170															
175															
180															

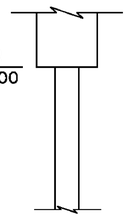
Remarks: Between 155 to 165 feet inferred intermittent coarse gravel and cobbles.

Notes: 1) Stratification lines represent approximate boundary between material types, transitions may be gradual.
2) Water level readings have been made at times and under conditions stated, fluctuations of groundwater may occur due to other factors than those present at the time measurements were made. AC = After coring; NR = Not Recorded.
3) Abbreviations: A = Auger; C = Core; D = Driven; G = Grab; PS = Piston Samples; SS = Split Spoon; SSL = 3.5 Inch ID Split Spoon; ST = Shelby Tube; V = Vane; WOR/PR = Weight of Rod/Hammer
4) Proportions Used: Trace = 1-10%; Little = 10-20%; Some = 20-35%; And = 35-50%

Boring No.: B-201

PROJECT NAME:	NEWPORT CITY
PROJECT NUMBER:	BRO 1449(25)
FILE NAME: 96J314/str/96J314bor.dgn	PLOT DATE: 22-NOV-2011
PROJECT LEADER: C. CARLSON	DRAWN BY: J. TOUCHETTE
DESIGNED BY: C. BENDA	CHECKED BY: C. BENDA
BORING LOG 6	SHEET 25 OF 75

BOTTOM OF PIER
NO. 2 ELEV. 682.00



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BORING LOG
Project Name
Mount Vernon Street Bridge (BHI)
Newport, Vermont

Boring No.: B-202
Page No.: 1 of 6
File No.: 0750-005.6
Checked By: JWK

Boring Company: VTRANS
Foreman: Glen Porter
GeoDesign Rep.: Ray Underwood
Date Started: April 14, 2008 Date Finished: April 17, 2008
N. Coordinate: E. Coordinate:
Ground Surface Elevation (feet): 680.9
Station: 14+15 Offset: 8.0 ft North

Casing:	Sampler:
Type: HW	SS
I.D.: 4.0 in.	1.38 in.
Hammer Wt.: N/A	140 lbs
Hammer Fall: N/A	30 in.
Rig Type: CME 55	
Hammer Type:	Auto

Groundwater Observations			
Date	Depth (ft)	Elev. (ft)	Notes
▼ 4/14/08	0.0	680.9	Lake Surface
▼ 4/17/08	0.0	680.9	Lake Surface
▼			

Depth (ft)	Casing Blows/ft	Sample Number	Sample Type	Sample Penetration (inches)	Sample Recovery (inches)	Depth (ft)	Blows / 6 inch Interval 0 - 6	6 - 12	12 - 18	18 - 24	Casing Time (min./ft.)	Moisture Content (%)	Strata Description Depth & Elevation (feet)	Symbol	Sample Description Classification System: Burmister
													Water		
5															
10															
15													13.5		
													Soft Lake Sediment 662.4		
20															
25															
30															

Remarks: Drilled from bridge deck at approximate El. 690.7 ft. Lake surface at approximately El. 680.9 ft. and mudline at approximately El. 660.7 ft.

Notes: 1) Stratification lines represent approximate boundary between material types, transitions may be gradual.
2) Water level readings have been made at times and under conditions stated, fluctuations of groundwater may occur due to other factors than those present at the time measurements were made. AC = After coring; NR = Not Recorded.
3) Abbreviations: A = Auger; C = Core; D = Driven; G = Grab; PS = Piston Sample; SS = Split Spoon; SSL = 3.5 Inch ID Split Spoon; ST = Shelby Tube; V = Vane; WOR/H = Weight of Rod/Hammer
4) Proportions Used: Trace = 1-10%; Little = 10-20%; Some = 20-35%; And = 35-50%

Boring No.: B-202

BORING LOG MC 121505 750-05.6.GPJ GEODESIGN STANDARD.GDT 6/20/08

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BORING LOG
Project Name
Mount Vernon Street Bridge (BHI)
Newport, Vermont

Boring No.: B-202
Page No.: 2 of 6
File No.: 0750-005.6
Checked By: JWK

Boring Company: VTRANS
Foreman: Glen Porter
GeoDesign Rep.: Ray Underwood
Date Started: April 14, 2008 Date Finished: April 17, 2008
N. Coordinate: E. Coordinate:
Ground Surface Elevation (feet): 680.9
Station: 14+10 Offset: 6.0 ft North

Casing:	Sampler:
Type: HW	SS
I.D.: 4.0 in.	1.38 in.
Hammer Wt.: N/A	140 lbs
Hammer Fall: N/A	30 in.
Rig Type: CME 55	
Hammer Type:	Auto

Groundwater Observations			
Date	Depth (ft)	Elev. (ft)	Notes
▼ 4/14/08	0.0	680.9	Lake Surface
▼ 4/17/08	0.0	680.9	Lake Surface
▼			

Depth (ft)	Casing Blows/ft	Sample Number	Sample Type	Sample Penetration (inches)	Sample Recovery (inches)	Depth (ft)	Blows / 6 inch Interval 0 - 6	6 - 12	12 - 18	18 - 24	Casing Time (min./ft.)	Moisture Content (%)	Strata Description Depth & Elevation (feet)	Symbol	Sample Description Classification System: Burmister
													Soft Lake Sediment *(Continued)*		
35															
40															
45															
50		1	SS	24	7	50.0	6	6	8	8			630.9		Medium dense, gray fine to coarse SAND, some Silt, little fine Gravel, (wet)
		2	SS	24	0	52.0	6	3	5	6					No recovery
55		3	SS	24	12	54.0	6	7	10	11			626.9		Medium dense, gray SILT, some fine to coarse Sand, trace fine Gravel, (moist)
		4	SS	24	6	56.0	3	3	3	4					Loose, gray SILT, some fine to medium Sand, little fine to coarse Gravel, (moist)
		5	SS	24	4	58.0	3	3	6	6			622.9		Loose, dark gray fine to medium SAND, little Silt, (wet)
60															

Remarks:

Notes: 1) Stratification lines represent approximate boundary between material types, transitions may be gradual.
2) Water level readings have been made at times and under conditions stated, fluctuations of groundwater may occur due to other factors than those present at the time measurements were made. AC = After coring; NR = Not Recorded.
3) Abbreviations: A = Auger; C = Core; D = Driven; G = Grab; PS = Piston Sample; SS = Split Spoon; SSL = 3.5 Inch ID Split Spoon; ST = Shelby Tube; V = Vane; WOR/H = Weight of Rod/Hammer
4) Proportions Used: Trace = 1-10%; Little = 10-20%; Some = 20-35%; And = 35-50%

Boring No.: B-202

GEODESIGN INCORPORATED
Geotechnical Engineers and Environmental Consultants
984 Southford Road
Middlebury, Connecticut 06762
Telephone: 203-758-8836 Fax: 203-758-8842

BORING LOG
Project Name
Mount Vernon Street Bridge (BHI)
Newport, Vermont

Boring No.: B-202
Page No.: 3 of 6
File No.: 0750-005.6
Checked By: JWK

Boring Company: VTRANS
Foreman: Glen Porter
GeoDesign Rep.: Ray Underwood
Date Started: Apr. 14, 2008 Date Finished: April 17, 2008
N. Coordinate: E. Coordinate:
Ground Surface Elevation (feet): 680.9
Station: 14+10 Offset: 6.0 ft North

Casing:	Sampler:
Type: HW	SS
I.D.: 4.0 in.	1.38 in.
Hammer Wt.: N/A	140 lbs
Hammer Fall: N/A	30 in.
Rig Type: CME 55	
Hammer Type:	Auto

Groundwater Observations			
Date	Depth (ft)	Elev. (ft)	Notes
▼ 4/14/08	0.0	680.9	Lake Surface
▼ 4/17/08	0.0	680.9	Lake Surface
▼			

Depth (ft)	Casing Blows/ft	Sample Number	Sample Type	Sample Penetration (inches)	Sample Recovery (inches)	Depth (ft)	Blows / 6 inch Interval 0 - 6	6 - 12	12 - 18	18 - 24	Casing Time (min./ft.)	Moisture Content (%)	Strata Description Depth & Elevation (feet)	Symbol	Sample Description Classification System: Burmister
		6	SS	24	11	60.0	5	7	9	10			Sand *(Continued)*		Medium dense, dark gray fine to medium SAND, trace Silt, (wet)
		7	SS	24	19	62.0	1	3	3	2			618.9		Loose, gray SILT, trace fine Sand, (wet)
65		8	SS	24	16	64.0	WOR	2	1	2			Silt		Very loose, gray SILT, trace fine to medium Sand, (wet)
70		9	SS	24	13	68.0	1	4	4	2					Loose, gray SILT, trace fine to medium Sand, (wet)
75		10	SS	24	7	74.0	8	5	5	3					Loose, gray SILT, trace fine to coarse Sand, trace fine Gravel, (wet)
80		11	SS	24	12	78.0	5	11	10	8					Medium dense, gray SILT, trace fine to mecium Sand, trace fine Gravel, (wet)
85		12	SS	24	5	84.0	5	4	5	6					Loose, gray SILT, trace fine to coarse Sand, trace fine Gravel, (wet)
90		13	SS	24	4	89.0	7	8	8	8					Medium dense, gray SILT, trace fine Sand,

Remarks: No sampling performed through soft lake sediments.
Install casing to 50 feet below lake or 61 feet below road surface on bridge deck before encountering resistance. Begin sampling 61 feet below bridge deck or 50 feet below lake surface.

Notes: 1) Stratification lines represent approximate boundary between material types, transitions may be gradual.
2) Water level readings have been made at times and under conditions stated, fluctuations of groundwater may occur due to other factors than those present at the time measurements were made. AC = After coring; NR = Not Recorded.
3) Abbreviations: A = Auger; C = Core; D = Driven; G = Grab; PS = Piston Sample; SS = Split Spoon; SSL = 3.5 Inch ID Split Spoon; ST = Shelby Tube; V = Vane; WOR/H = Weight of Rod/Hammer
4) Proportions Used: Trace = 1-10%; Little = 10-20%; Some = 20-35%; And = 35-50%

Boring No.: B-202

PROJECT NAME: NEWPORT CITY
PROJECT NUMBER: BRO 1449(25)

FILE NAME: 96J314/str/96J314bor.dgn PLOT DATE: 22-NOV-2011
PROJECT LEADER: C. CARLSON DRAWN BY: J. TOUCHETTE
DESIGNED BY: C. BENDA CHECKED BY: C. BENDA
BORING LOG 7 SHEET 26 OF 75

GEODESIGN INCORPORATED
Geotechnical Engineers and Environmental Consultants
984 Southford Road
Middlebury, Connecticut 06762
Telephone: 203-758-8825 Fax: 203-758-8842

BORING LOG

Project Name: Mount Vernon Street Bridge (BHI)
Newport, Vermont

Boring No.: B-202
Page No.: 4 of 8
File No.: 0750-005.6
Checked By: JWK

Boring Company: VTRANS
Foreman: Glen Porter
GeoDesign Rep.: Ray Underwood
Date Started: April 14, 2006 Date Finished: April 17, 2006
N. Coordinate: E. Coordinate:
Ground Surface Elevation (feet): 680.9
Station: 14+10 Offset: 6.0 ft Nt

Casing: Type	Casing: I.D.	Sampler: Type	Sampler: I.D.	Sampler: Hammer Wt.	Sampler: Hammer Fall	Rig Type	Hammer Type
HW	4.0 in.	SS	1.38 in.	N/A	30 in.	CME 55	Auto

Groundwater Observations: Date	Depth (ft)	Elev. (ft)	Notes
4/14/06	0.0	680.9	Lake Surface
4/17/06	0.0	680.9	Lake Surface

Sample Information: Depth (ft)	Casing Blowsft	Number	Type	Penetration (inches)	Recovery (inches)	Depth (ft)	Blows / 6 inch Interval: 0 - 6	6 - 12	12 - 18	18 - 24	Casing Time (min./ft)	Moisture Content (%)	Strata Description: Depth & Elevation(feet)	Symbol	Sample Description: Classification System: Burmister
													Silt (Continued)		trace fine Gravel, (wet)
95		14	SS	24	13	94.0	3	3	4	4					Loose, gray SILT, some fine Sand, (wet)
100		15	SS	24	13	99.0	2	5	7	9					Medium dense, dark gray SILT, little fine to coarse Sand, trace fine Gravel, (wet)
													102.0 Glacial Till 578.9		
105		16	SS	24	13	104.0	28	30	36	35					Very dense, gray fine to coarse SAND, some Silt, some fine to coarse Gravel, (moist)
110		17	SS	24	8	109.0	38	45	44	32					Very dense, gray SILT, some fine to coarse Sand, some fine to coarse Gravel, (moist)
115		18	SS	24	4	114.0	38	69	38	25					Very dense, gray fine to coarse SAND, some Silt, trace fine Gravel, (moist)
120		19	SS	21	12	119.0	20	17	41	50/3"					Very dense, gray fine to coarse SAND, some

Remarks: Top of glacial till inferred at approximately 102 feet due to increased drilling effort.

Notes: 1) Stratification lines represent approximate boundary between material types, transitions may be gradual.
2) Water level readings have been made at times and under conditions stated, fluctuations of groundwater may occur due to other factors than those present at the time measurements were made. AC = After coring; NR = Not Recorded.
3) Abbreviations: A = Auger; C = Core; D = Driven; G = Grab; PS = Piston Sampler; SS = Split Spoon; SSL = 3.5 Inch ID Split Spoon; ST = Shelby Tube; V = Vane; WOR/H = Weight of Rod/Hammer
4) Proportions Used: Trace = 1-10%; Little = 10-20%; Some = 20-35%; And = 35-50%

Boring No.: B-202

ESTIMATED SHAFT TIP
ELEV. 547.00

GEODESIGN INCORPORATED
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BORING LOG

Project Name: Mount Vernon Street Bridge (BHI)
Newport, Vermont

Boring No.: B-202
Page No.: 5 of 6
File No.: 0750-005.6
Checked By: JWK

Boring Company: VTRANS
Foreman: Glen Porter
GeoDesign Rep.: Ray Underwood
Date Started: April 14, 2006 Date Finished: April 17, 2006
N. Coordinate: E. Coordinate:
Ground Surface Elevation (feet): 680.9
Station: 14+10 Offset: 6.0 ft North

Casing: Type	Casing: I.D.	Sampler: Type	Sampler: I.D.	Sampler: Hammer Wt.	Sampler: Hammer Fall	Rig Type	Hammer Type
HW	4.0 in.	SS	1.38 in.	N/A	30 in.	CME 55	Auto

Groundwater Observations: Date	Depth (ft)	Elev. (ft)	Notes
4/14/06	0.0	680.9	Lake Surface
4/17/06	0.0	680.9	Lake Surface

Sample Information: Depth (ft)	Casing Blowsft	Number	Type	Penetration (inches)	Recovery (inches)	Depth (ft)	Blows / 6 inch Interval: 0 - 6	6 - 12	12 - 18	18 - 24	Casing Time (min./ft)	Moisture Content (%)	Strata Description: Depth & Elevation(feet)	Symbol	Sample Description: Classification System: Burmister
													Glacial Till (Continued)		Silt, little fine to coarse Gravel, (moist)
125		20	SS	13	12	124.0	38	44	50/5"						Very dense, gray fine to coarse SAND, some fine to coarse Gravel, some Silt, (moist)
130		21	SS	9	3	129.0	48	50/5"							Very dense, gray fine to coarse SAND, some Silt, little fine Gravel, (moist)
135		22	SS	9	2	134.0	48	50/5"							Very dense, gray fine to coarse SAND, some Silt, little fine Gravel, (moist)
140		23	SS	11	4	139.0	9	50/5"							Very dense, gray fine to coarse SAND, some Silt, some fine Gravel, (moist)
145		24	SS	22	14	144.0	20	35	80	50/4"					Very dense, gray fine to coarse SAND and SILT, little fine Gravel, (moist)
150		25	SS	10	8	149.0	33	/0/4"							Very dense, gray fine to coarse SAND, some

Remarks:

Notes: 1) Stratification lines represent approximate boundary between material types, transitions may be gradual.
2) Water level readings have been made at times and under conditions stated, fluctuations of groundwater may occur due to other factors than those present at the time measurements were made. AC = After coring; NR = Not Recorded.
3) Abbreviations: A = Auger; C = Core; D = Driven; G = Grab; PS = Piston Sampler; SS = Split Spoon; SSL = 3.5 Inch ID Split Spoon; ST = Shelby Tube; V = Vane; WOR/H = Weight of Rod/Hammer
4) Proportions Used: Trace = 1-10%; Little = 10-20%; Some = 20-35%; And = 35-50%

Boring No.: B-202

GEODESIGN INCORPORATED
Geotechnical Engineers and Environmental Consultants
984 Southford Road
Middlebury, Connecticut 06762
Telephone: 203-758-8825 Fax: 203-758-8842

BORING LOG

Project Name: Mount Vernon Street Bridge (BHI)
Newport, Vermont

Boring No.: B-202
Page No.: 6 of 6
File No.: 0750-005.6
Checked By: JWK

Boring Company: VTRANS
Foreman: Glen Porter
GeoDesign Rep.: Ray Underwood
Date Started: April 14, 2006 Date Finished: April 17, 2006
N. Coordinate: E. Coordinate:
Ground Surface Elevation (feet): 680.9
Station: 14+10 Offset: 6.0 ft North

Casing: Type	Casing: I.D.	Sampler: Type	Sampler: I.D.	Sampler: Hammer Wt.	Sampler: Hammer Fall	Rig Type	Hammer Type
HW	4.0 in.	SS	1.38 in.	N/A	30 in.	CME 55	Auto

Groundwater Observations: Date	Depth (ft)	Elev. (ft)	Notes
4/14/06	0.0	680.9	Lake Surface
4/17/06	0.0	680.9	Lake Surface

Sample Information: Depth (ft)	Casing Blowsft	Number	Type	Penetration (inches)	Recovery (inches)	Depth (ft)	Blows / 6 inch Interval: 0 - 6	6 - 12	12 - 18	18 - 24	Casing Time (min./ft)	Moisture Content (%)	Strata Description: Depth & Elevation(feet)	Symbol	Sample Description: Classification System: Burmister
													Glacial Till (Continued)		Silt, some fine to coarse Gravel, (moist)
165		26	SS	6	3	164.0	100/5"						165.0 Bottom of Exploration at 165.0 ft 526.9		Very dense, gray GRAVEL
170															
175															
180															

Remarks:

Notes: 1) Stratification lines represent approximate boundary between material types, transitions may be gradual.
2) Water level readings have been made at times and under conditions stated, fluctuations of groundwater may occur due to other factors than those present at the time measurements were made. AC = After coring; NR = Not Recorded.
3) Abbreviations: A = Auger; C = Core; D = Driven; G = Grab; PS = Piston Sampler; SS = Split Spoon; SSL = 3.5 Inch ID Split Spoon; ST = Shelby Tube; V = Vane; WOR/H = Weight of Rod/Hammer
4) Proportions Used: Trace = 1-10%; Little = 10-20%; Some = 20-35%; And = 35-50%

Boring No.: B-202

PROJECT NAME: NEWPORT CITY
PROJECT NUMBER: BRO 1449(25)

FILE NAME: 96J314/str/96J314bor.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: C. BENDA
BORING LOG 8

PLOT DATE: 22-NOV-2011
DRAWN BY: J. TOUCHETTE
CHECKED BY: C. BENDA
SHEET 27 OF 75

BOTTOM OF PIER NO. 1, ELEVATION 682.00

BORING LOG MC 12/15/03 750458.GPJ GEODESIGN STANDARD.GDT 10/1/08

GEODESIGN INCORPORATED
Geotechnical Engineers and Environmental Consultants
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Middlebury, Connecticut 06762
Telephone: 203-758-8836 Fax: 203-758-8842

BORING LOG

Project Name: Mount Vernon Street Bridge (BHI) — Newport, Vermont

Boring No.: B-203 | Page No.: 1 of 6 | File No.: 0750-005.6 | Checked By: JWK

Boring Company: VTRANS
Foreman: Glen Porter
GeoDesign Rep.: Ray Underwood
Date Started: April 9, 2008 Date Finished: April 14, 2008
N. Coordinate: E. Coordinate:
Ground Surface Elevation (feet): 682.7
Station: 12+62 Offset: 6.0 ft North

Casing: Type	Casing: I.D.	Sampler:	Groundwater Observations: Date	Depth (ft)	Elev. (ft)	Notes
HW	4.0 in.	SS 1.38 in.				
Hammer Wt.: N/A	140 lbs	▼	4/9/08	0.0	682.7	Lake Surface
Hammer Fall: N/A	30 in.	▼	4/14/08	0.0	682.7	Lake Surface
Rig Type: CME 55		▼				
Hammer Type: Auto		▼				

Depth (ft)	Casing Blows/ft	Sample Number	Sample Type	Sample Penetration (inches)	Sample Recovery (inches)	Sample Depth (ft)	Blows / 6 inch Interval 0 - 6	6 - 12	12 - 18	18 - 24	Casing Time (min./ft)	Moisture Content (%)	Strata Description: Depth & Elevation (feet)	Symbol	Sample Description: Classification System: Burmister
													Water		
5															
10															
15															
20													21.5 Organic Silt/Clay with Shells 660.2		
25															
30															

Remarks: Drilled from bridge deck at approximately El. 680.7 feet. Lake surface at approximately El. 680.9 feet and mudline at approximately El. 659.2 ft.
No sampling performed through soft lake sediments.

Notes: 1) Stratification lines represent approximate boundary between material types, transitions may be gradual.
2) Water level readings have been made at times and under conditions stated, fluctuations of groundwater may occur due to other factors than those present at the time measurements were made. AC = After coring; NR = Not Recorded.
3) Abbreviations: A = Auger; C = Core; D = Driven; G = Grab; PS = Piston Sample; SS = Split Spoon; SSL = 3.5 Inch ID Split Spoon; ST = Shelby Tube; V = Vane; WOR/H = Weight of Rod/Hammer
4) Proportions Used: Trace = 1-10%; Little = 10-20%; Some = 20-35%; And = 35-50%

Boring No.: B-203

GEODESIGN INCORPORATED
Geotechnical Engineers and Environmental Consultants
984 Southford Road
Middlebury, Connecticut 06762
Telephone: 203-758-8836 Fax: 203-758-8842

BORING LOG

Project Name: Mount Vernon Street Bridge (BHI) — Newport, Vermont

Boring No.: B-203 | Page No.: 2 of 6 | File No.: 0750-005.6 | Checked By: JWK

Boring Company: VTRANS
Foreman: Glen Porter
GeoDesign Rep.: Ray Underwood
Date Started: April 5, 2008 Date Finished: April 14, 2008
N. Coordinate: E. Coordinate:
Ground Surface Elevation (feet): 682.7
Station: 12+62 Offset: 6.0 ft North

Casing: Type	Casing: I.D.	Sampler:	Groundwater Observations: Date	Depth (ft)	Elev. (ft)	Notes
HW	4.0 in.	SS 1.38 in.				
Hammer Wt.: N/A	140 lbs	▼	4/9/08	0.0	682.7	Lake Surface
Hammer Fall: N/A	30 in.	▼	4/14/08	0.0	682.7	Lake Surface
Rig Type: CME 55		▼				
Hammer Type: Auto		▼				

Depth (ft)	Casing Blows/ft	Sample Number	Sample Type	Sample Penetration (inches)	Sample Recovery (inches)	Sample Depth (ft)	Blows / 6 inch Interval 0 - 6	6 - 12	12 - 18	18 - 24	Casing Time (min./ft)	Moisture Content (%)	Strata Description: Depth & Elevation (feet)	Symbol	Sample Description: Classification System: Burmister
													Organic Silt/Clay with Shells *(Continued)*		
35															
40													40.0		
		1	SS	24	13	40.0	11	18	16	10			Sand & Gravel 642.7		Dense, dark gray fine to coarse SAND and fine to coarse GRAVEL, little Silt, (wet)
		2	SS	24	3	42.0	10	5	5	7					Medium dense, dark gray fine to coarse SAND and fine Gravel, trace Silt, (wet)
45		3	SS	24	0	44.0	6	5	5	3					No recovery
		4	SS	24	6	46.0	2	3	5	8					Loose, gray medium to coarse SAND, little fine Gravel, trace Silt, (wet)
		5	SS	24	6	48.0	7	11	20	12					Dense, dark gray fine GRAVEL and fine to coarse SAND, trace Silt, (wet)
50		6	SS	24	6	50.0	4	4	8	6					Medium dense, dark gray fine to coarse SAND and fine to coarse GRAVEL, trace Silt, (wet)
		7	SS	24	6	52.0	6	8	5	5					Medium dense, gray SILT and fine to coarse SAND, little fine Gravel, (wet)
55		8	SS	24	9	54.0	9	8	12	11					Medium dense, gray fine to coarse SAND and fine to coarse GRAVEL, trace Silt, (wet)
60															

Remarks:

Notes: 1) Stratification lines represent approximate boundary between material types, transitions may be gradual.
2) Water level readings have been made at times and under conditions stated, fluctuations of groundwater may occur due to other factors than those present at the time measurements were made. AC = After coring; NR = Not Recorded.
3) Abbreviations: A = Auger; C = Core; D = Driven; G = Grab; PS = Piston Sample; SS = Split Spoon; SSL = 3.5 Inch ID Split Spoon; ST = Shelby Tube; V = Vane; WOR/H = Weight of Rod/Hammer
4) Proportions Used: Trace = 1-10%; Little = 10-20%; Some = 20-35%; And = 35-50%

Boring No.: B-203

GEODESIGN INCORPORATED
Geotechnical Engineers and Environmental Consultants
984 Southford Road
Middlebury, Connecticut 06762
Telephone: 203-758-8836 Fax: 203-758-8842

BORING LOG

Project Name: Mount Vernon Street Bridge (BHI) — Newport, Vermont

Boring No.: B-203 | Page No.: 3 of 6 | File No.: 0750-005.6 | Checked By: JWK

Boring Company: VTRANS
Foreman: Glen Porter
GeoDesign Rep.: Ray Underwood
Date Started: April 5, 2008 Date Finished: April 14, 2008
N. Coordinate: E. Coordinate:
Ground Surface Elevation (feet): 682.7
Station: 12+62 Offset: 6.0 ft North

Casing: Type	Casing: I.D.	Sampler:	Groundwater Observations: Date	Depth (ft)	Elev. (ft)	Notes
HW	4.0 in.	SS 1.38 in.				
Hammer Wt.: N/A	140 lbs	▼	4/9/08	0.0	682.7	Lake Surface
Hammer Fall: N/A	30 in.	▼	4/14/08	0.0	682.7	Lake Surface
Rig Type: CME 55		▼				
Hammer Type: Auto		▼				

Depth (ft)	Casing Blows/ft	Sample Number	Sample Type	Sample Penetration (inches)	Sample Recovery (inches)	Sample Depth (ft)	Blows / 6 inch Interval 0 - 6	6 - 12	12 - 18	18 - 24	Casing Time (min./ft)	Moisture Content (%)	Strata Description: Depth & Elevation (feet)	Symbol	Sample Description: Classification System: Burmister
		9	SS	19	6	60.0	14	11	47	50/1"			Sand & Gravel *(Continued)*		Very dense, gray fine to coarse SAND, some fine to coarse Gravel, trace Silt, (wet)
65															
		10	SS	24	12	65.0	16	11	11	20					Medium dense, gray fine to coarse GRAVEL and fine to coarse SAND, trace Silt, (wet)
													67.0 Silt 615.7		
70															Medium dense, gray SILT, trace fine Sand, (wet)
		11	SS	24	14	70.0	7	10	9	10					
75															Dense, gray SILT, (wet)
		12	SS	24	1	75.0	16	20	22	27					
80															Medium dense, gray SILT, trace fine Sand, (wet)
		13	SS	24	20	80.0	5	7	12	16					
85															Medium dense, gray SILT, trace fine to medium Sand, (wet)
		14	SS	24	18	85.0	6	11	12	10					
90															

Remarks: Inferred cobbles and boulders from 62 to 85 feet.

Notes: 1) Stratification lines represent approximate boundary between material types, transitions may be gradual.
2) Water level readings have been made at times and under conditions stated, fluctuations of groundwater may occur due to other factors than those present at the time measurements were made. AC = After coring; NR = Not Recorded.
3) Abbreviations: A = Auger; C = Core; D = Driven; G = Grab; PS = Piston Sample; SS = Split Spoon; SSL = 3.5 Inch ID Split Spoon; ST = Shelby Tube; V = Vane; WOR/H = Weight of Rod/Hammer
4) Proportions Used: Trace = 1-10%; Little = 10-20%; Some = 20-35%; And = 35-50%

Boring No.: B-203

PROJECT NAME:	NEWPORT CITY
PROJECT NUMBER:	BRO 1449(25)
FILE NAME: 96j314/str/96j314bor.dgn	PLOT DATE: 22-NOV-2011
PROJECT LEADER: C. CARLSON	DRAWN BY: J. TOUCHETTE
DESIGNED BY: C. BENDA	CHECKED BY: C. BENDA
BORING LOG 9	SHEET 28 OF 75

GEODESIGN INCORPORATED

Geotechnical Engineers and Environmental Consultants
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Middlebury, Connecticut 06762
Telephone: 203-758-8836 Fax: 203-758-8842

BORING LOG

Project Name: Mount Vernon Street Bridge (BHI)
Newport, Vermont

Boring No.: B-203
Page No.: 4 of 8
File No.: 0750-005.6
Checked By: JWK

Boring Company: VTRANS
Foreman: Glen Porter
GeoDesign Rep.: Ray Underwood
Date Started: April 9, 2008 Date Finished: April 14, 2008
N. Coordinate: E. Coordinate:
Ground Surface Elevation (feet): 680.7
Station: 12+92 Offset: 6.0 ft North

Casing:	Sampler:
Type: HW	SS
I.D.: 4.0 in.	1.38 in.
Hammer Wt.: N/A	140 lbs
Hammer Fall: N/A	30 in.
Rig Type: CME 55	
Hammer Type: Auto	

Groundwater Observations			
Date	Depth (ft)	Elev. (ft)	Notes
4/9/08	0.0	680.7	Lake Surface
4/14/08	0.0	680.7	Lake Surface

Depth (ft)	Casing Blows/ft	Sample Information: Number	Type	Penetration (inches)	Recovery (inches)	Depth (ft)	Blows / 6 inch Interval: 0 - 6	6 - 12	12 - 18	18 - 24	Coring Time (min./ft)	Moisture Content (%)	Strata Description: Depth & Elevation (feet)	Symbol	Sample Description: Classification System: Burmister
		16	SS	24	23	90.0	7	9	8	8			Silt (Continued)		Medium dense, gray SILT, little fine to coarse Sand, trace fine Gravel, (wet)
95		16	SS	24	21	95.0	10	10	9	11					Medium dense, gray SILT, little fine to coarse Sand, trace fine Gravel, (wet)
100		17	SS	24	21	100.0	8	9	9	9					Medium dense, gray SILT, little fine to medium Sand, (wet)
105		18	SS	24	17	105.0	7	7	7	9					Medium dense, gray SILT, little fine Sand, (wet)
110		19	SS	24	18	110.0	5	6	5	5					Medium dense, gray SILT, little fine to coarse Sand, trace fine Gravel, (wet)
115		20	SS	24	18	115.0	5	4	5	6					Loose, gray SILT, some fine to medium Sand, trace fine Gravel, (wet)
120															

Remarks

Notes: 1) Stratification lines represent approximate boundary between material types, transitions may be gradual.
2) Water level readings have been made at times and under conditions stated, fluctuations of groundwater may occur due to other factors than those present at the time measurements were made. AC = After coring; NR = Not Recorded.
3) Abbreviations: A = Auger; C = Core; D = Driven; G = Grab; PS = Piston Sample; SS = Split Spoon; SSL = 3.5 Inch ID Split Spoon; ST = Shelby Tube; V = Vane; WOR/H = Weight of Rod/Hammer
4) Proportions Used: Trace = 1-10%; Little = 10-20%; Some = 20-35%; And = 35-50%

Boring No.: B-203

ESTIMATED SHAFT TIP
ELEV. 547.00

GEODESIGN INCORPORATED

Geotechnical Engineers and Environmental Consultants
984 Southford Road
Middlebury, Connecticut 06762
Telephone: 203-758-8836 Fax: 203-758-8842

BORING LOG

Project Name: Mount Vernon Street Bridge (BHI)
Newport, Vermont

Boring No.: B-203
Page No.: 5 of 6
File No.: 0750-005.6
Checked By: JWK

Boring Company: VTRANS
Foreman: Glen Porter
GeoDesign Rep.: Ray Underwood
Date Started: April 9, 2008 Date Finished: April 14, 2008
N. Coordinate: E. Coordinate:
Ground Surface Elevation (feet): 680.7
Station: 12+92 Offset: 6.0 ft North

Casing:	Sampler:
Type: HW	SS
I.D.: 4.0 in.	1.38 in.
Hammer Wt.: N/A	140 lbs
Hammer Fall: N/A	30 in.
Rig Type: CME 55	
Hammer Type: Auto	

Groundwater Observations			
Date	Depth (ft)	Elev. (ft)	Notes
4/9/08	0.0	680.7	Lake Surface
4/14/08	0.0	680.7	Lake Surface

Depth (ft)	Casing Blows/ft	Sample Information: Number	Type	Penetration (inches)	Recovery (inches)	Depth (ft)	Blows / 6 inch Interval: 0 - 6	6 - 12	12 - 18	18 - 24	Coring Time (min./ft)	Moisture Content (%)	Strata Description: Depth & Elevation (feet)	Symbol	Sample Description: Classification System: Burmister
		21	SS	24	13	120.0	10	9	9	12			Silt (Continued)		Medium dense, gray SILT and fine to coarse SAND, trace fine Gravel, (wet)
125		22	SS	24	17	125.0	12	34	35	21			123.0 Glacial Till 557.7		Very dense, gray fine to coarse SAND, some fine to coarse Gravel, little Silt, (moist)
130		23	SS	24	13	130.0	42	44	45	48					Very dense, gray fine to coarse SAND, some fine to coarse Gravel, some Silt, (moist)
135		24	SS	9	2	135.0	50	50/3"							Very dense, gray SILT and fine to coarse SAND, little fine to coarse Gravel, (wet)
140		25	SS	2	0	140.0	50/2"								No recovery
145		26	SS	11	4	145.0	16	50/5"							Very dense, gray fine to coarse SAND, some Silt, little fine Gravel, (wet)
150															

Remarks: Top of glacial till inferred at approximately 123 feet due to increased drilling resistance.

Notes: 1) Stratification lines represent approximate boundary between material types, transitions may be gradual.
2) Water level readings have been made at times and under conditions stated, fluctuations of groundwater may occur due to other factors than those present at the time measurements were made. AC = After coring; NR = Not Recorded.
3) Abbreviations: A = Auger; C = Core; D = Driven; G = Grab; PS = Piston Sample; SS = Split Spoon; SSL = 3.5 Inch ID Split Spoon; ST = Shelby Tube; V = Vane; WOR/H = Weight of Rod/Hammer
4) Proportions Used: Trace = 1-10%; Little = 10-20%; Some = 20-35%; And = 35-50%

Boring No.: B-203

GEODESIGN INCORPORATED

Geotechnical Engineers and Environmental Consultants
984 Southford Road
Middlebury, Connecticut 06762
Telephone: 203-758-8836 Fax: 203-758-8842

BORING LOG

Project Name: Mount Vernon Street Bridge (BHI)
Newport, Vermont

Boring No.: B-203
Page No.: 6 of 6
File No.: 0750-005.6
Checked By: JWK

Boring Company: VTRANS
Foreman: Glen Porter
GeoDesign Rep.: Ray Underwood
Date Started: April 9, 2008 Date Finished: April 14, 2008
N. Coordinate: E. Coordinate:
Ground Surface Elevation (feet): 680.7
Station: 12+92 Offset: 6.0 ft North

Casing:	Sampler:
Type: HW	SS
I.D.: 4.0 in.	1.38 in.
Hammer Wt.: N/A	140 lbs
Hammer Fall: N/A	30 in.
Rig Type: CME 55	
Hammer Type: Auto	

Groundwater Observations			
Date	Depth (ft)	Elev. (ft)	Notes
4/9/08	0.0	680.7	Lake Surface
4/14/08	0.0	680.7	Lake Surface

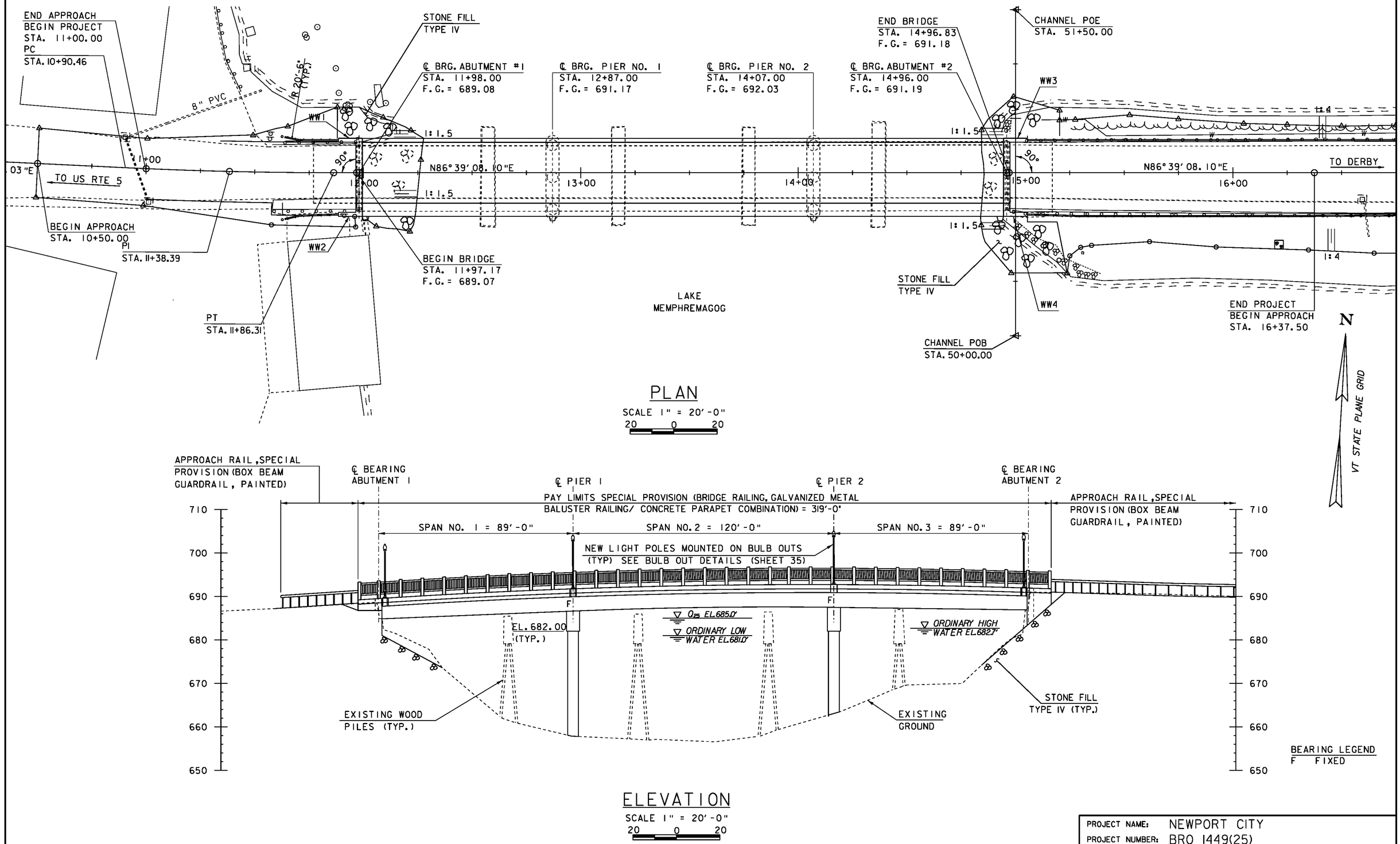
Depth (ft)	Casing Blows/ft	Sample Information: Number	Type	Penetration (inches)	Recovery (inches)	Depth (ft)	Blows / 6 inch Interval: 0 - 6	6 - 12	12 - 18	18 - 24	Coring Time (min./ft)	Moisture Content (%)	Strata Description: Depth & Elevation (feet)	Symbol	Sample Description: Classification System: Burmister
		27	SS	8	3	150.0	70	50/2"					Glacial Till (Continued)		Very dense, gray fine to coarse SAND and SILT, trace fine Gravel, (wet)
155		28	SS	6	2	155.0	100/8"						155.5 Bottom of Exploration at 155.5 ft 525.2		Very dense, gray fine to coarse SAND and SILT, trace fine Gravel, (wet)
160															
165															
170															
175															
180															

Remarks

Notes: 1) Stratification lines represent approximate boundary between material types, transitions may be gradual.
2) Water level readings have been made at times and under conditions stated, fluctuations of groundwater may occur due to other factors than those present at the time measurements were made. AC = After coring; NR = Not Recorded.
3) Abbreviations: A = Auger; C = Core; D = Driven; G = Grab; PS = Piston Sample; SS = Split Spoon; SSL = 3.5 Inch ID Split Spoon; ST = Shelby Tube; V = Vane; WOR/H = Weight of Rod/Hammer
4) Proportions Used: Trace = 1-10%; Little = 10-20%; Some = 20-35%; And = 35-50%

Boring No.: B-203

PROJECT NAME:	NEWPORT CITY
PROJECT NUMBER:	BRO 1449(25)
FILE NAME: 96J314/str/96J314bor.dgn	PLOT DATE: 22-NOV-2011
PROJECT LEADER: C. CARLSON	DRAWN BY: J. TOUCHETTE
DESIGNED BY: C. BENDA	CHECKED BY: C. BENDA
BORING LOG 10	SHEET 29 OF 75



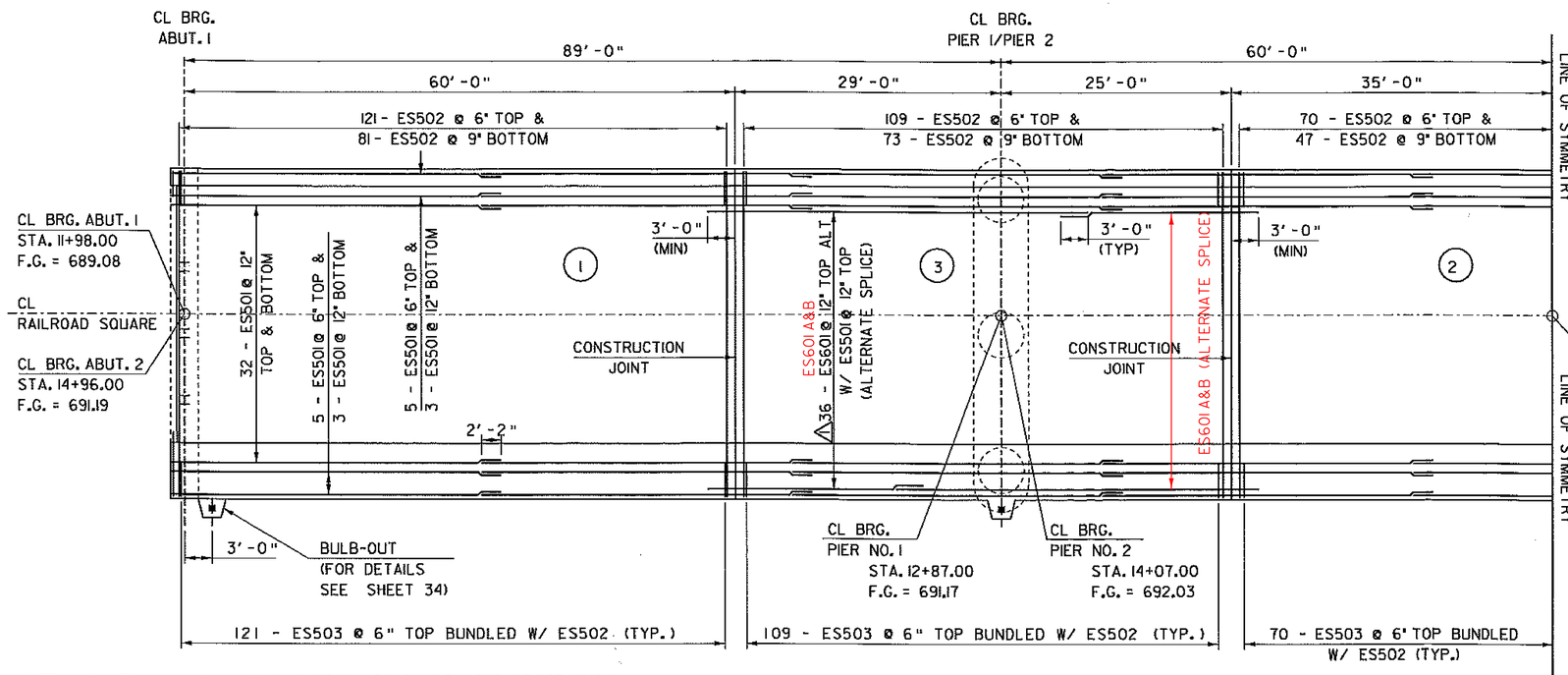
PLAN

SCALE 1" = 20'-0"
20 0 20

ELEVATION

SCALE 1" = 20'-0"
20 0 20

PROJECT NAME:	NEWPORT CITY
PROJECT NUMBER:	BRO 1449(25)
FILE NAME: 96J314/str/96J314pe.dgn	PLOT DATE: 22-NOV-2011
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: D. PETERSON	CHECKED BY: C. CARLSON
PLAN AND ELEVATION SHEET	SHEET 30 OF 75



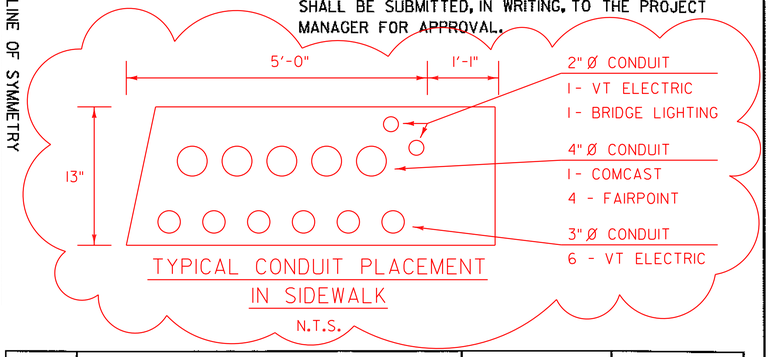
•CURB AND SIDEWALK REINFORCING OMITTED FOR CLARITY. SEE BRIDGE TYPICAL.

DECK REINFORCING PLAN

SCALE 1/8" = 1'-0"

POUR SEQUENCE NOTES:

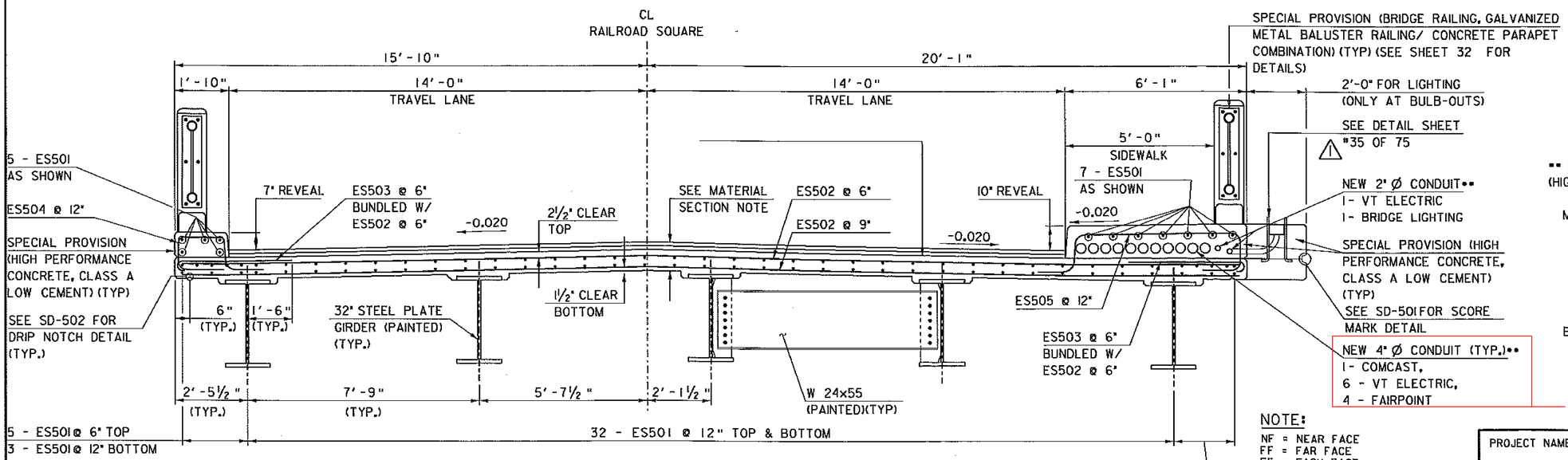
1. IF APPROVED BY THE ENGINEER, POURS FOR THE ENTIRE DECK MAY BE POURED THE SAME DAY PROVIDED THAT THE MAXIMUM TIMESPAN OF THE POUR IS EIGHT HOURS.
2. TRANSVERSE BRIDGE SLAB CONSTRUCTION JOINTS. AS SHOWN ON STRUCTURES STANDARD DETAIL SD 501.00
3. ALL INDIVIDUAL DECK POURS SHALL START FROM THE LOW END (RELATIVE TO GRADE).
4. THERE SHALL BE A MINIMUM DELAY PERIOD OF 96 HOURS BETWEEN POURS.
5. ANY POURING SEQUENCE OTHER THAN INDICATED SHALL BE SUBMITTED, IN WRITING, TO THE PROJECT MANAGER FOR APPROVAL.



TYPICAL CONDUIT PLACEMENT IN SIDEWALK

N.T.S.

REV.	DESCRIPTION	DATE	REVISION BY
⚠	UPDATED NOTE TO SHEET #35	3/8/2012	DRP
	UPDATED REBAR QUANTITY	3/8/2012	DRP



SEE REVISED DRAWING ABOVE

•• PAYMENT INCIDENTAL TO SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, CLASS A LOW CEMENT)

MATERIAL SECTION
1½" BCP, TYPE IVS
1½" BCP, TYPE IVS
8½" SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, CLASS A LOW CEMENT)•

BCP SHOULD BE READ AS BITUMINOUS CONCRETE PAVEMENT AND SHALL BE PAID FOR UNDER ITEM 900.680 "SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)".

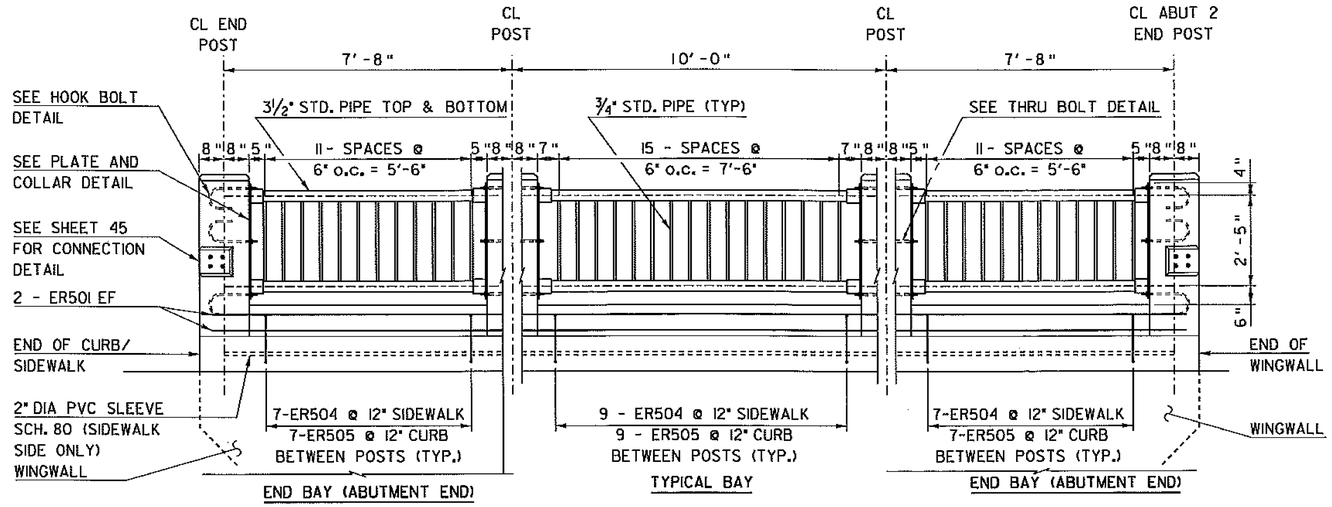
BRIDGE TYPICAL

SCALE 1/2" = 1'-0"

NOTE:
NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

PROJECT NAME: NEWPORT CITY
PROJECT NUMBER: BRO 1449(25)

FILE NAME: str/96314sup.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
DECK REINFORCING DETAIL
PLOT DATE: 08-MAR-2012
DRAWN BY: C. MOONEY
CHECKED BY: D. PETERSON
SHEET 31 OF 75



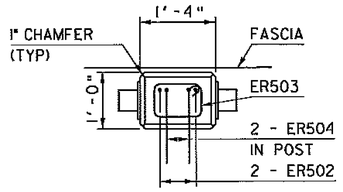
BRIDGE RAIL ELEVATION

SCALE ½" = 1'-0"

BRIDGE RAILING NOTES

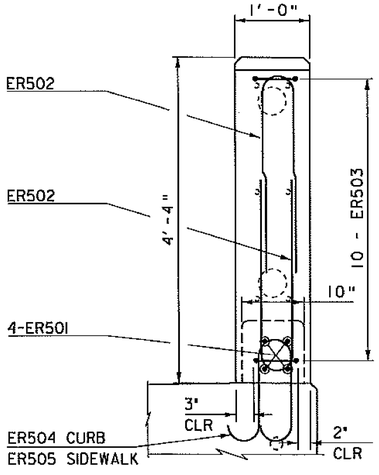
1. HOLES AND RECESSES MUST BE FORMED, PERCUSSION DRILLING IS NOT PERMITTED.
2. ALL CONCRETE FOR BRIDGE RAILING SHALL BE SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, CLASS A LOW CEMENT).
3. ALL REINFORCING STEEL FOR THE CAST IN PLACE SPECIAL PROVISION (BRIDGE RAILING, GALVANIZED METAL BALUSTER RAILING/ CONCRETE PARAPET COMBINATION) SHALL BE EPOXY, COATED, AND INCLUDED IN THE UNIT PRICE BID FOR ITEM 900.640 "SPECIAL PROVISION (BRIDGE RAILING, GALVANIZED METAL BALUSTER RAILING/ CONCRETE PARAPET COMBINATION)."
4. ALL MATERIALS AND WORK ASSOCIATED WITH THE BRIDGE RAILING SHALL BE PAID FOR UNDER ITEM 900.640 "SPECIAL PROVISION (BRIDGE RAILING, GALVANIZED METAL BALUSTER RAILING/ CONCRETE PARAPET COMBINATION)".
5. STEEL PIPE FOR TOP AND BOTTOM RAIL, AND BALUSTERS SHALL BE SEAMLESS, CONFORMING TO ASTM 53, GRADE B. BASE PLATES SHALL CONFORM TO AASHTO M 270 GRADE 250.
6. HIGH STRENGTH BOLTS AND NUTS FOR THE METAL HAND RAILING SHALL CONFORM TO ASTM 325 TYPE 1.
7. ALL METAL RAILING PIPES, POSTS, BALUSTERS, BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AFTER FABRICATION IN CONFORMANCE TO AASHTO M252 (ASTM A53) AND AASHTO M111 (ASTM A123) AND PAINTED BLACK (COLOR CHIP # 27038) ALL COMPONENTS OF THE METAL RAIL AND ITS FABRICATION INCLUDING PAINTING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 900.640 SPECIAL PROVISION (BRIDGE RAILING, GALVANIZED METAL BALUSTER RAILING/ CONCRETE PARAPET COMBINATION)
8. ⚠ THE COLLAR TO BASE PLATE WELD SHALL BE ALLOWED IN THE FIELD ONLY FOR EACH END BAY RAIL SECTION.

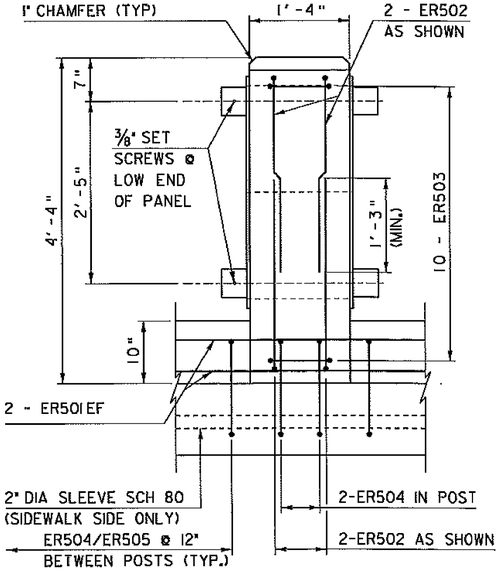
REV.	DESCRIPTION	DATE	REVISION BY
⚠	REMOVED FIELD WELD NOTATION	3/8/2012	DRP - VAOT
	ADDED NOTE 8	3/8/2012	DRP - VAOT



POST TYPICAL SECTION

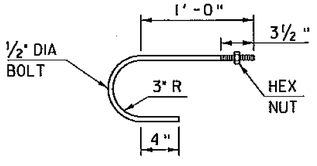
SCALE ¾" = 1'-0"





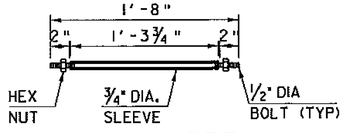
POST ELEVATION DETAILS

SCALE 1" = 1'-0"



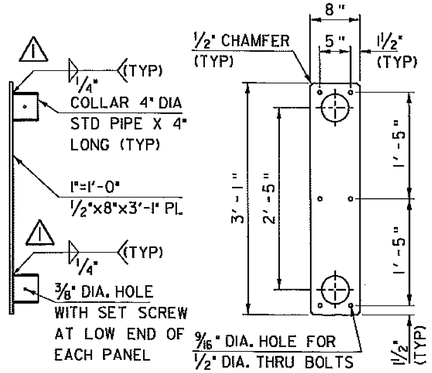
HOOK BOLT DETAIL

SCALE 1½" = 1'-0"
(USE 6 AT EACH END POST LOCATION)



THRU BOLT DETAIL

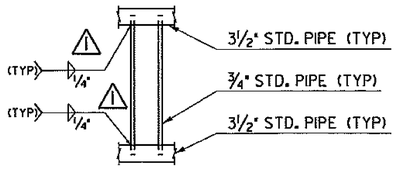
SCALE 1½" = 1'-0"
(USE 6 AT EACH INTERIOR POST LOCATION)



BASE PLATE AND COLLAR DETAIL**

1"=1'-0"

⚠ ** SEE NOTE 8



BALUSTER ELEVATION VIEW

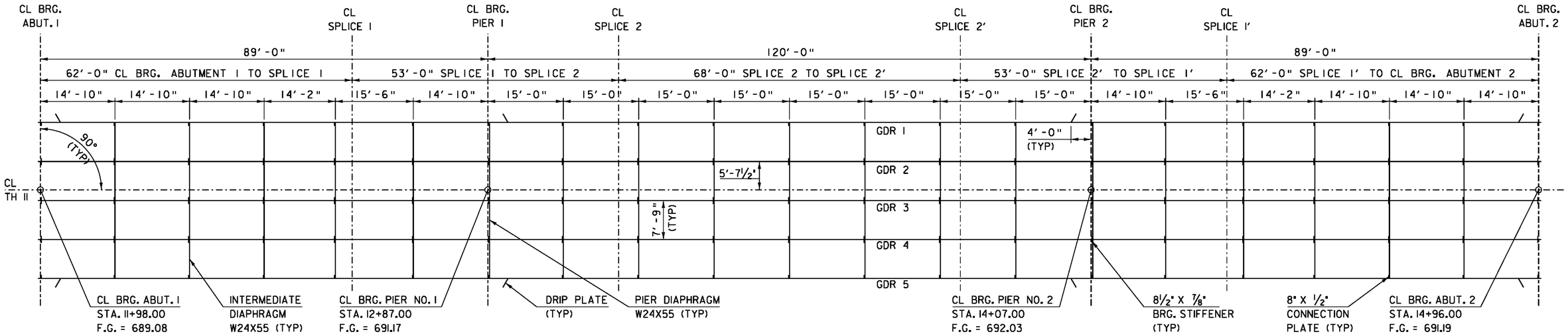
SCALE ¾" = 1'-0"

NOTE:
NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

PROJECT NAME: NEWPORT CITY
PROJECT NUMBER: BRO 1449(25)

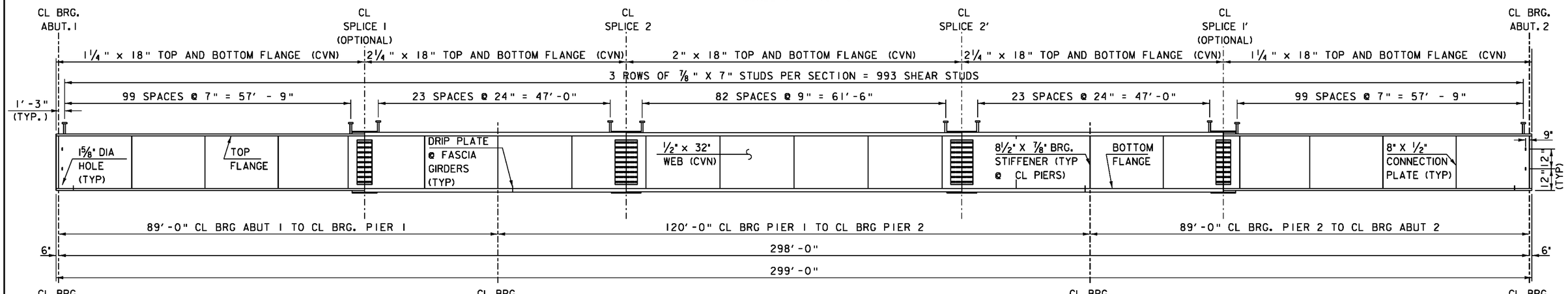
FILE NAME: str/96j314sup.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
BRIDGE RAILING SHEET

PLOT DATE: 08-MAR-2012
DRAWN BY: C. MOONEY
CHECKED BY: D. PETERSON
SHEET 32 OF 75



FRAMING PLAN

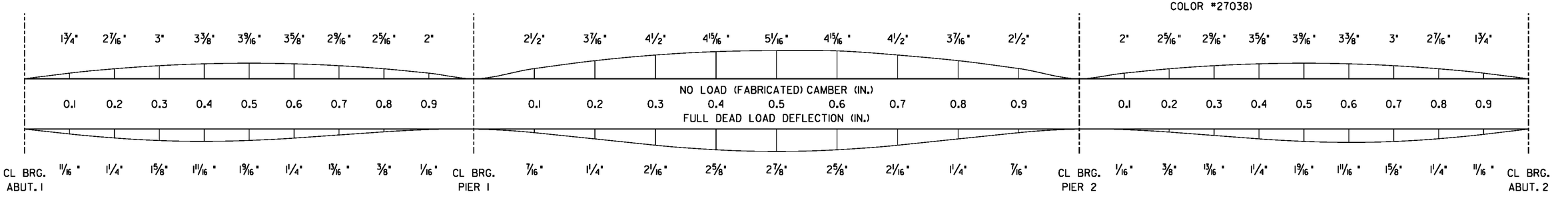
SCALE 1" = 10'-0"



GIRDER ELEVATION

HORIZONTAL SCALE 1" = 10'-0"
VERTICAL SCALE ¼" = 1'-0"

NOTE:
1. FOR ALL SPLICE DETAILS, BEARING STIFFENERS, AND INTERMEDIATE DIAPHRAGMS SEE GIRDER DETAILS SHEET 34
2. ALL STRUCTURAL STEEL SHALL BE PAINTED BLACK(CHIP COLOR #27038)



CAMBER AND DEAD LOAD DEFLECTION

HORIZONTAL SCALE 1" = 10'-0"
VERTICAL SCALE ½" = 1'-0"

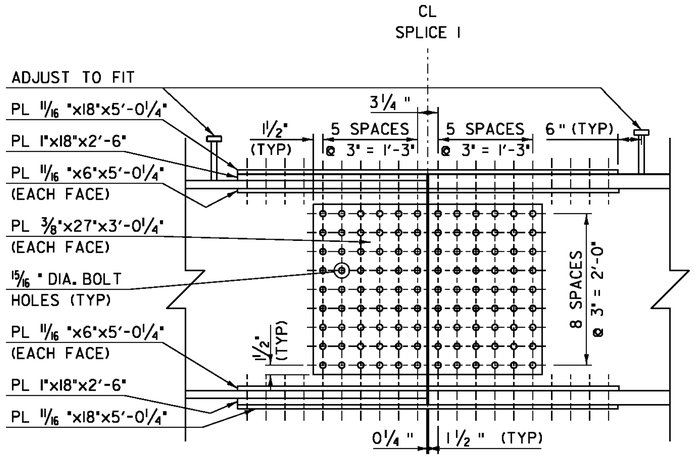
NOTES:
CAMBER AND DEFLECTION MEASUREMENTS ARE GIVEN AT TENTH POINTS

DEAD LOAD DEFLECTION IS DUE TO GIRDER, DIAPHRAGMS, DECK, CURB, SIDEWALK, AND RAILING.

PROJECT NAME: NEWPORT CITY
PROJECT NUMBER: BRO 1449(25)

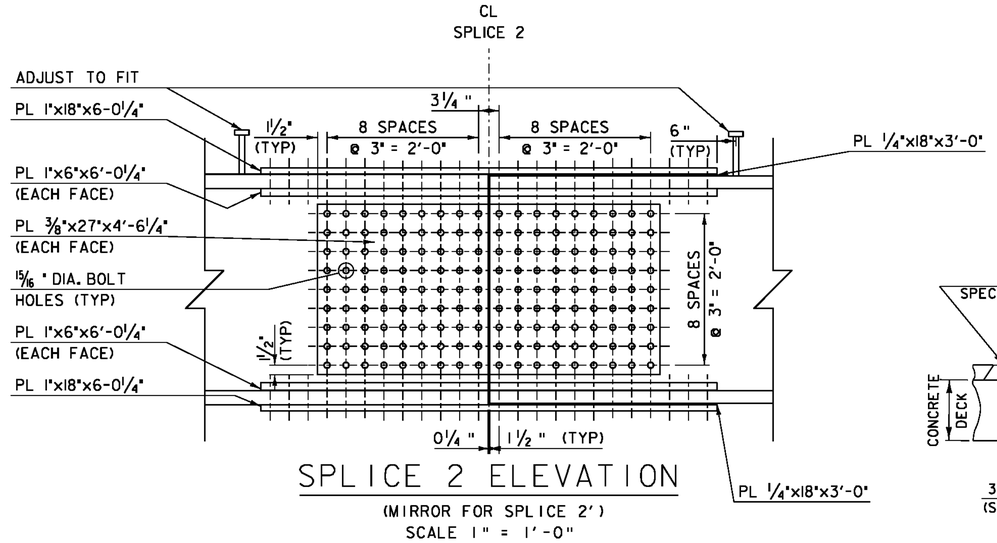
FILE NAME: str/96j314sup.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
FRAMING PLAN

PLOT DATE: 22-NOV-2011
DRAWN BY: C. MOONEY
CHECKED BY: D. PETERSON
SHEET 33 OF 75



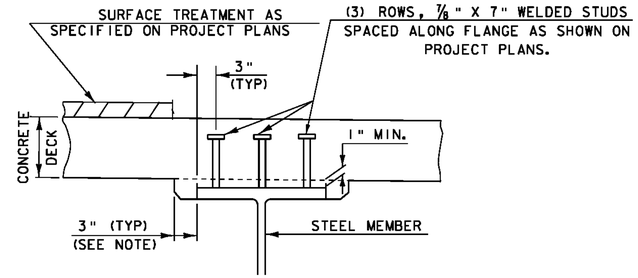
SPLICE 1 ELEVATION

(MIRROR FOR SPLICE 1')
SCALE 1" = 1'-0"



SPLICE 2 ELEVATION

(MIRROR FOR SPLICE 2')
SCALE 1" = 1'-0"



HAUNCH AND SHEAR CONNECTOR DETAILS

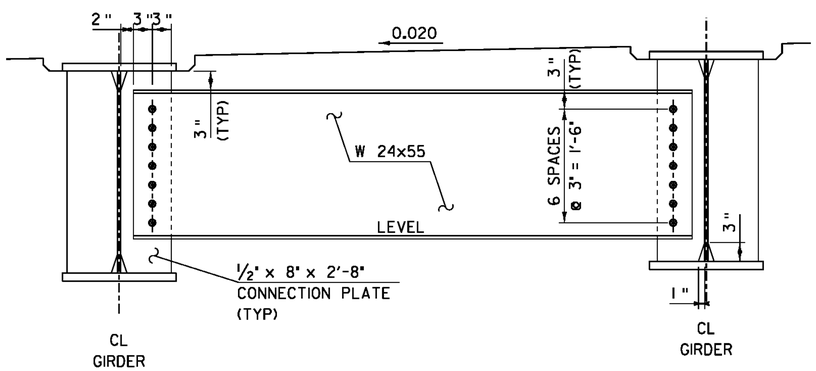
NOTE: THE 3" HORIZONTAL SECTION MAY BE ELIMINATED FOR FORMING SYSTEMS DESIGNED FOR THE CONSTRUCTION OF VERTICAL HAUNCHES. ANY VOIDS RESULTING FROM FORMING SYSTEM ELEMENTS SHALL BE FILLED WITH JOINT SEALER, POLYURETHANE MEETING THE REQUIREMENTS OF SECTION 524. THE COST OF THE JOINT SEALER, POLYURETHANE SHALL BE INCIDENTAL TO THE ADJACENT CONCRETE.

SPLICE 1 PLAN

(MIRROR FOR SPLICE 1')
SCALE 1" = 1'-0"

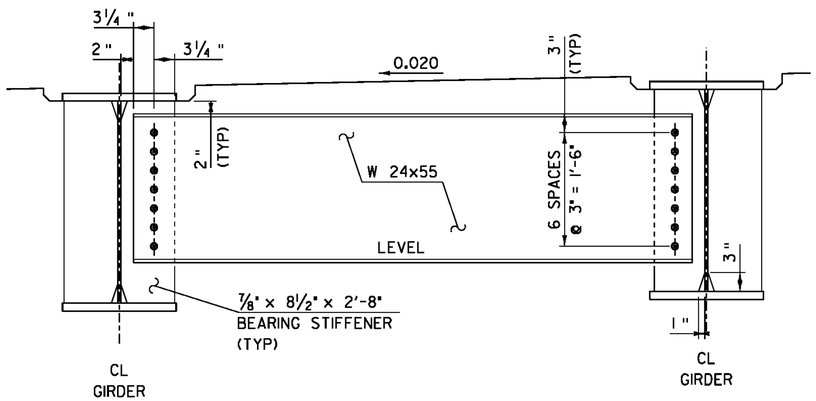
SPLICE 2 PLAN

(MIRROR FOR SPLICE 2')
SCALE 1" = 1'-0"



TYPICAL INTERMEDIATE DIAPHRAGM

SCALE 1" = 1'-0"



TYPICAL PIER DIAPHRAGM

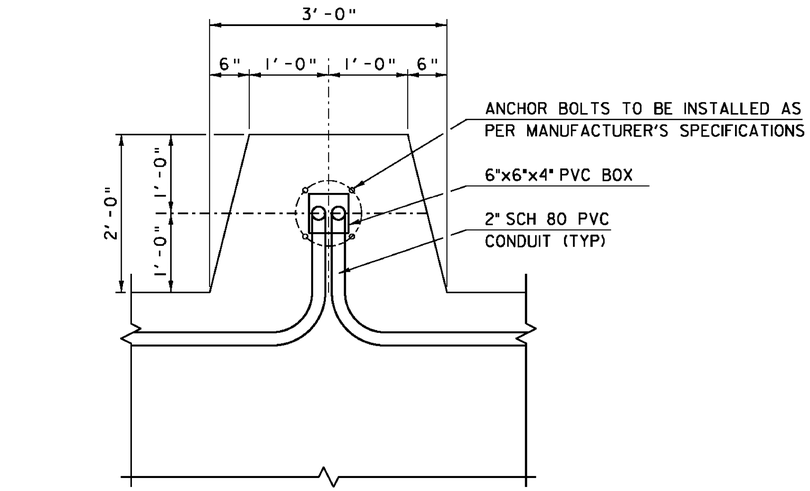
SCALE 1" = 1'-0"

NOTE:
1. FOR CONNECTION DETAILS SEE STRUCTURES STANDARD DETAILS SHEET (SD 602.00)
2. ALL SPLICE PLATES TO BE CVN (CHARPY V NOTCH)

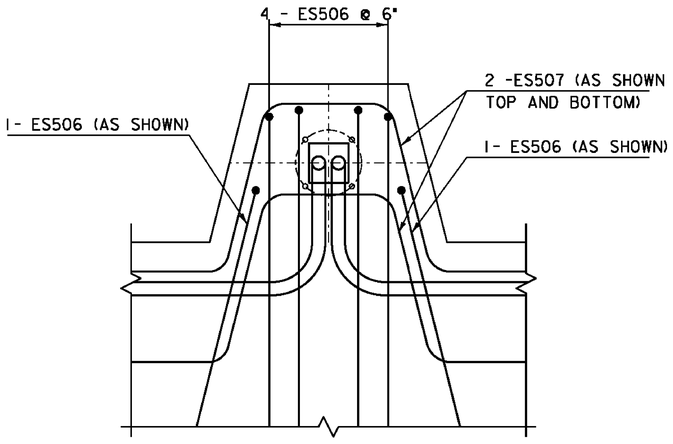
PROJECT NAME: NEWPORT CITY
PROJECT NUMBER: BRO 1449(25)

FILE NAME: str/96j314sup.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
GIRDER DETAILS

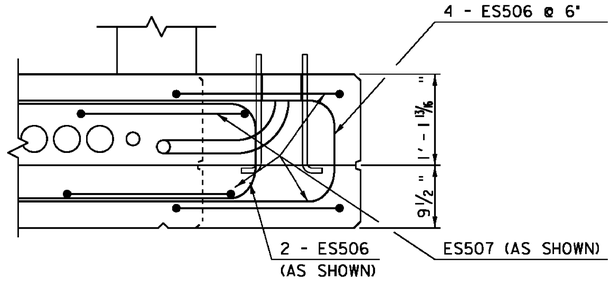
PLOT DATE: 22-NOV-2011
DRAWN BY: C. MOONEY
CHECKED BY: D. PETERSON
SHEET 34 OF 75



BRIDGE LIGHT BULB-OUT
PLAN VIEW
SCALE 1"= 1'-0"



BRIDGE LIGHT BULB-OUT
REINFORCING PLAN VIEW
SCALE 1"= 1'-0"



BRIDGE LIGHT BULB-OUT
CROSS SECTION
SCALE 1"= 1'-0"

BRIDGE LIGHT NOTES:

1. THE SCOPE OF WORK IS TO PROVIDE ALL LABOR, MATERIALS, SERVICES, SUPPLIES, TOOLS, EQUIPMENT, TRANSPORTATION, AND FACILITIES NECESSARY TO FURNISH AND INSTALL COMPLETE ELECTRICAL WORK AS CALLED FOR ON THE DRAWINGS SPECIFIED, OR AS MAY REASONABLY BE IMPLIED, AS BEING INCIDENTAL TO THIS WORK.

2. ALL MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRIC CODE, AND ALL CODES, REGULATIONS AND OTHER REQUIREMENTS OF ALL MUNICIPAL, STATE, FEDERAL, UTILITY, AND OTHER PUBLIC OR PRIVATE AUTHORITIES WHICH HAVE JURISDICTION. IN EACH CASE, CODES ARE MINIMUM REQUIREMENTS.

3. FABRICATION DRAWINGS: SUBMIT COMPLETE CATALOG INFORMATION FOR ALL MATERIALS AND EQUIPMENT TO BE PURCHASED AND USED ON THE PROJECT AS SPECIFIED ON THE DRAWINGS AND AS REQUIRED BY SUBSECTION 679.02. DO NOT INSTALL MATERIALS OR EQUIPMENT WITHOUT APPROVAL BY THE ENGINEER. UNAPPROVED MATERIAL ALREADY INSTALLED SHALL BE SUBJECT TO REMOVAL AND REPLACEMENT WITH APPROVED MATERIALS AT THE CONTRACTOR'S OWN EXPENSE.

4. MATERIALS AND EQUIPMENT SHALL BE LISTED BY UNDERWRITERS' LABORATORIES AND SHALL BE INSTALLED IN ACCORDANCE WITH SUCH LISTINGS.

5. INSTALLATION SHALL BE MADE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

6. CONTRACTOR TO CONTACT VERMONT ELECTRIC FOR COORDINATION OF NEW ELECTRICAL SERVICE. SEE UTILITY SPECIAL PROVISONS FOR CONTACT TELEPHONE NUMBER.

7. METER/DISCONNECT STANCHIONS SHALL INCLUDE MAIN SERVICE DISCONNECT (2 POLE, 80A, 240V SINGLE PHASE) AND (6)SIX BRANCH CIRCUIT BREAKERS (1 POLE, 20A, 120V). ALL SERVICE ENTRANCE EQUIPMENT SHALL BE RATED 22KAIC (MIN).

8. MAXIMUM OF 270 DEGREES IN TOTAL BEND SHALL BE PERMITTED IN SINGLE RUN OF CONDUIT.

9. LIGHTS SHALL BE FUSED AT BASE WITH Y-TYPE FUSE KIT (EQUIVALENT OF HOMAC/FLOOD SEAL: FYC-6 AND 10 AMP FUSE).

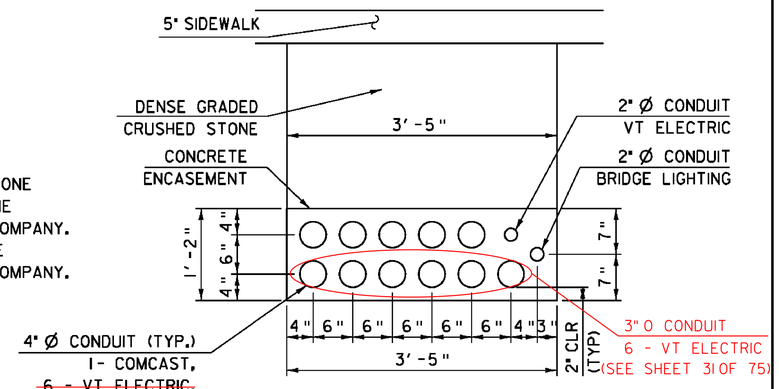
10. UTILIZE DUAL-RATED PARALLEL TAP CONNECTORS AT BASE EQUIVALENT TO ILSCO GTA SERIES WITH INSULATED COVERS.

11. CONTRACTOR TO VERIFY DEPTH REQUIREMENTS FOR ANCHOR BOLTS PRIOR TO PLACEMENT OF DECK CONCRETE

12. THE FINISH FOR BOTH THE POLE, BASE, AND LUMINAIRE BRACKET SHALL BE PHILIPS LUMEC GN4/TX.

DUCT BANK NOTES:

1. THE CONTRACTOR SHALL SUPPLY AND INSTALL ONE PULL ROPE FOR EACH CONDUIT THAT MEETS THE SPECIFICATIONS OF THE APPROPRIATE UTILITY COMPANY.
2. THE INSTALLED PVC CONDUITS SHALL MEET THE SPECIFICATIONS OF THE APPROPRIATE UTILITY COMPANY.



SPECIAL PROVISION (DUCT BANK, 13 CONDUIT)
SCALE 1"= 1'-0"

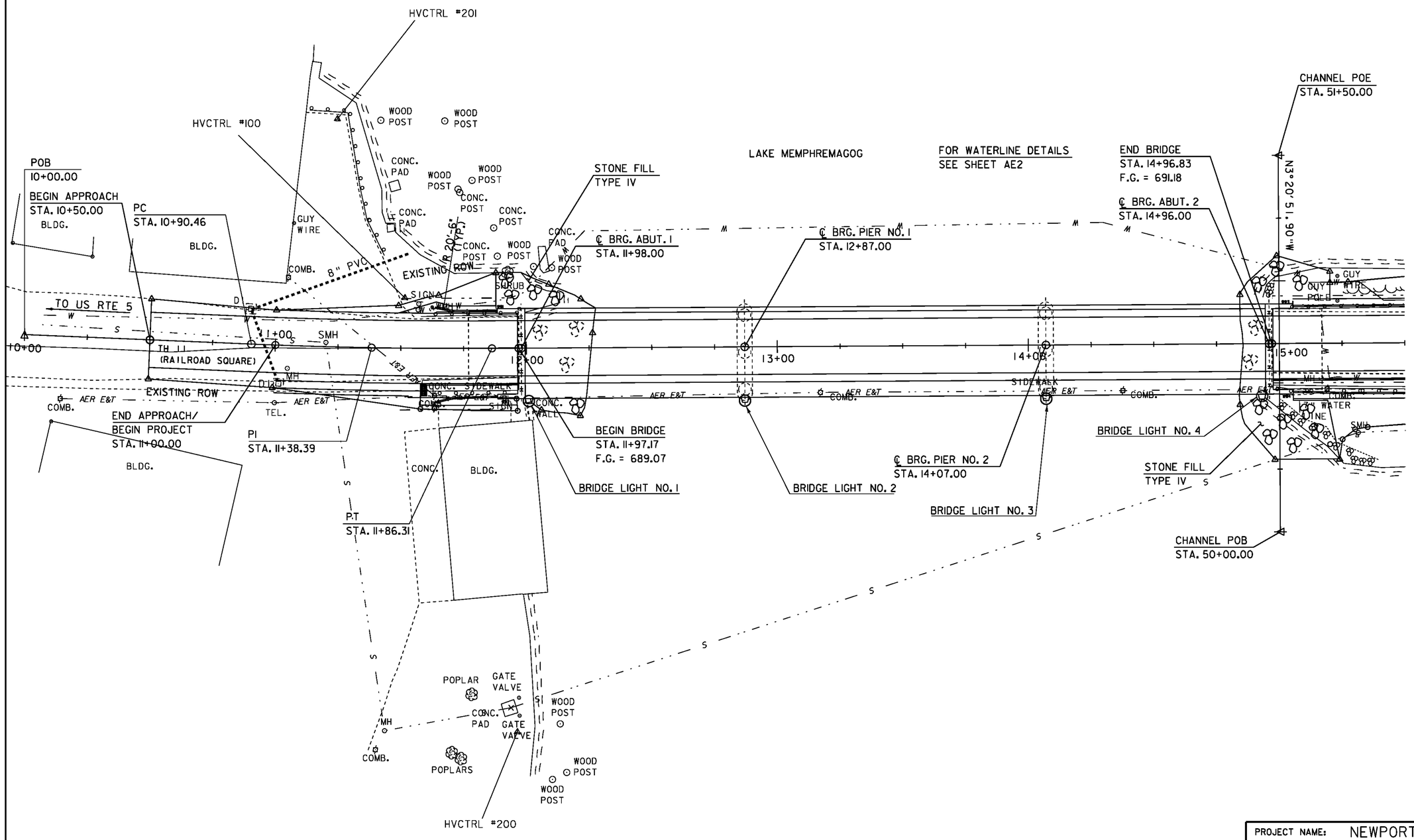
NOTE:
NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

PROJECT NAME: NEWPORT CITY
PROJECT NUMBER: BRO 1449(25)

FILE NAME: str/s96j314lighting.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
LIGHTING & UTILITIES DETAILS SHEET

PLOT DATE: 02-DEC-2011
DRAWN BY: C. MOONEY
CHECKED BY: D. PETERSON
SHEET 35 OF 75

LIGHT NO.	LOCATION	OFFSET	HEIGHT TO LUMINAIRE(FT)	MANUFACTURER	CATALOGUE No.	LAMPS	JUNCTION BOX	REMARKS
1	12+01.00	21'-1" RT	14'	LUMEC	CAND1-CN1-1A-150HPS-RR3-240V-GN4/TX-AM8U-15	(1) 150W/HPS	POLE	SITE LITE, 240V (VERIFY VOLTAGE)
2	12+87.00	21'-1" RT	14'	LUMEC	CAND1-CN1-1A-150HPS-RR3-240V-GN4/TX-AM8U-15	(1) 150W/HPS	POLE	SITE LITE, 240V (VERIFY VOLTAGE)
3	14+07.00	21'-1" RT	14'	LUMEC	CAND1-CN1-1A-150HPS-RR3-240V-GN4/TX-AM8U-15	(1) 150W/HPS	POLE	SITE LITE, 240V (VERIFY VOLTAGE)
4	14+93.00	21'-1" RT	14'	LUMEC	CAND1-CN1-1A-150HPS-RR3-240V-GN4/TX-AM8U-15	(1) 150W/HPS	POLE	SITE LITE, 240V (VERIFY VOLTAGE)



SCALE 1" = 20'-0"
20 0 20

PROJECT NAME:	NEWPORT CITY
PROJECT NUMBER:	BRO 1449(25)
FILE NAME: str/s96j314lighting.dgn	PLOT DATE: 22-NOV-2011
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: D. PETERSON	CHECKED BY: C. CARLSON
BRIDGE LIGHTING LAYOUT SHEET	SHEET 36 OF 75

ELASTOMERIC BEARING NOTES

1) ABUTMENT BEARINGS SHALL BE PAID FOR UNDER ITEM 531.14 “BEARING DEVICE ASSEMBLY, INTEGRAL ABUTMENT”. PIER BEARINGS SHALL BE PAID FOR UNDER THE ITEM 531.11 "BEARING DEVICE ASSEMBLY, ELASTOMERIC PAD". BOTH BEARING DEVICES SHALL CONFORM TO APPLICABLE SUBSECTIONS OF SECTIONS 531 AND 731.

2) ALL MATERIALS SHALL CONFORM TO SECTION 14 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS AND SECTION 18 OF AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS AND ALL AASHTO OR ASTM SPECIFICATIONS REFERENCED IN THE CONTRACTDOCUMENTS.

3) THE ELASTOMERIC COMPOUND SHALL BE VIRGIN CRYSTALLIZATION RESISTANT POLYCHLOROPRENE (NEOPRENE) OR VIRGIN NATURAL POLYISOPRENE (NATURAL RUBBER) AS THE RAW POLYMER, EXCEPT WHEN USING A DISC THE COMPOUND SHALL BE BASED ON POLYETHER URETHANE, USING ONLY VIRGIN MATERIALS. THE RESULTING PRODUCT SHALL BE FREE OF POROUS AREAS, WEAK SECTIONS, BUBBLES, FOREIGN MATTER, OR OTHER DEFECTS AFFECTING SERVICEABILITY. IT SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 251.

4) ELASTOMER WAS DESIGNED USING METHOD A, WITH A NOMINAL HARDNESS OF 50 +/- 5 ON THE SHORE A SCALE, EXCEPT FOR DISCS WHICH SHALL HAVE A HARDNESS OF 50 +/- 5 ON THE SHORE D SCALE. IT IS ACCEPTABLE TO TEST PER AASHTO M 251 APPENDIX X1. ELASTOMER SHALL MEET THE REQUIREMENTS FOR LOW-TEMPERATURE ZONE D, GRADE 4.

5) ALTERNATE CONFIGURATIONS FOR BEARINGS MAY BE SUBMITTED FOR APPROVAL. ANY ALTERNATE SUBMITTED SHALL BE DESIGNED AND CERTIFIED TO MEET THE DESIGN LOADS AND CRITERIA SHOWN ON THIS SHEET. THE ALTERNATE SHALL MAINTAIN THE ANCHORAGE SYSTEM SHOWN AND SHALL BE DESIGNED PER THE LATEST AASHTO LRFD BRIDGE DESIGN SPECIFICATION. BRIDGE SEAT ELEVATIONS MAY BE REVISED TO ACCOMMODATE AN ALTERNATIVE CONFIGURATION.

6) STEEL REINFORCED ELASTOMERIC PADS SHALL BE WITHIN THE TOLERANCES LISTED IN TABLE 2 IN AASHTO M251. EXTERNAL LOAD PLATES SHALL BE WITHIN THE TOLERANCES GIVEN IN SECTION 18 OF THE AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS.

7) BEARING SHALL BE SET LEVEL AND PARALLEL WITHIN 0.03125 IN./FT. WITH FULL AND UNIFORM BEARING. THE CONCRETE UNDER THE BEARING DEVICE SHALL BE LEVEL.

8) DURING ANY WELDING, SURFACES IN CONTACT WITH THE ELASTOMER SHALL BE RESTRICTED TO 200 DEGREES FAHRENHEIT, AND SURFACES IN CONTACT WITH PTFE SHALL BE RESTRICTED TO 300 DEGREES FAHRENHEIT. TEMPERATURE SHALL BE DETERMINED BY TEMPERATURE INDICATING WAX PENCILS OR OTHER SUITABLE MEANS.

9) PRIOR TO ORDERING MATERIALS AND STARTING THE WORK, THE CONTRACTOR SHALL SUBMIT A DRILLING AND MORTARING PROPOSAL TO THE ENGINEER FOR APPROVAL, INCLUDING A PREMIXED MORTAR MATERIAL BRAND NAME.

10) THE MORTAR SHALL BE MIXED IN A MECHANICAL MIXER ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS AND SHALL BE READILY POURABLE SO THAT WHEN POURED IT COMPLETELY FILLS THE REMAINING HOLE CAVITIES. THE PLACEMENT OF MORTAR FOR EACH BEARING SHALL BE CONTINUOUS AND COMPLETE AT ALL HOLE LOCATIONS.

11) ALL EXPOSED MORTAR SHALL BE CURED FOR A PERIOD OF NOT LESS THAN THREE (3) DAYS BY THE WETTED BURLAP METHOD IN ACCORDANCE WITH SECTION 501. CURING SHALL COMMENCE AS SOON AS PRACTICAL AFTER MORTAR PLACEMENT. THE CONTRACTOR SHALL NOT APPLY ANY FORCES TO THE ANCHOR BOLTS DURING THE CURING PERIOD.

12) ANCHOR BOLTS TO BE DOUBLE NUTTED SHALL USE THE FOLLOWING PROCEDURE: INSTALL THE LOWER NUT IN CONTACT WITH TOP OF SOLE PLATE, AND THEN BACK OFF ½ TURN. INSTALL UPPER NUT SNUG TIGHT TO PREVENT LOWER NUTS FROM LOOSENING.

13) BRIDGE SEAT ELEVATIONS ARE BASED ON THE BEARING HEIGHTS SHOWN. PRIOR TO CASTING THE SUBSTRUCTURE UNITS, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER THE PROPOSED BEARING HEIGHT AS PROVIDED BY THE MANUFACTURER AND ANY ELEVATION MODIFICATIONS REQUIRED BEFORE CONSTRUCTING THE SUBSTRUCTURE UNITS.

14) BOLTS INSTALLED IN PAINTED STRUCTURAL COMPONENTS SHALL BE TYPE 1, SHALL BE PROVIDED WITH APPROPRIATE NUTS AND WASHERS, AS REQUIRED, AND THE COMBINATION OF BOLT, NUT, AND WASHER SHALL BE MECHANICALLY GALVANIZED IN ACCORDANCE WITH AASHTO M 298, CLASS 50, TYPE 1.

15) BOLTS FURNISHED FOR BEARINGS SHALL CONFORM TO SUBSECTION 714.08. THE BOLTS, NUTS, AND WASHERS FURNISHED SHALL BE TESTED AND CERTIFIED AS MEETING THE REQUIREMENTS OF THE ZINC THICKNESS TEST AS SPECIFIED IN SUBSECTION 714.05, IN ADDITION TO ANY OTHER TEST AND CERTIFICATION REQUIREMENTS.

16) THE WELDS FOR THE SOLE PLATE CONNECTION SHOULD ONLY BE ALONG THE LONGITUDINAL GIRDER AXIS. TRANSVERSE JOINTS SHOULD BE SEALED WITH AN ACCEPTABLE CAULKING MATERIAL.

17) PRIOR TO WELDING GIRDERS TO SOLE PLATES AT THE PIERS, THE CONCRETE DECK SHALL BE PLACED AND CURED, AND THE GIRDERS SHALL BE RAISED TO ALLOW RELEASE OF INITIAL BEARING DEFORMATION DUE TO GIRDER CAMBER RELAXATION.

18) GALVANIZING THAT HAS BEEN DAMAGED SHALL BE REPAIRED IN ACCORDANCE WITH ASTM A780, STANDARD PRACTICE FOR REPAIR OF DAMAGED HOT DIPPED GALVANIZED COATINGS, ANNEX A2. THE PAINT USED IN THE REPAIR SHALL BE ORGANIC-RICH, CONTAINING 92 PERCENT(MIN.) ZINC BY WEIGHT IN THE DRY FILM. THE PAINT SHALL BE APPLIED PER MANUFACTURER'S RECOMMENDATIONS TO A THICKNESS EQUIVALENT TO THE SURROUNDING GALVANIZING.

19) METALIZING THAT HAS BEEN DAMAGED SHALL BE REPAIRED USING THE METHODS DESCRIBED IN NOTE 20.

20) STEEL REINFORCED ELASTOMERIC BEARINGS SHALL HAVE A MINIMUM 1/8 INCH EDGE SEAL OF ELASTOMER INTEGRAL WITH BEARING OVER ALL INTERNAL PLATES.

21) DESIGN CRITERIA:

A) DESIGN ROTATION

ABUTMENTS 1&2	= 0.018 RAD
PIER 1	= 0.011 RAD
PIER 2	= 0.015 RAD

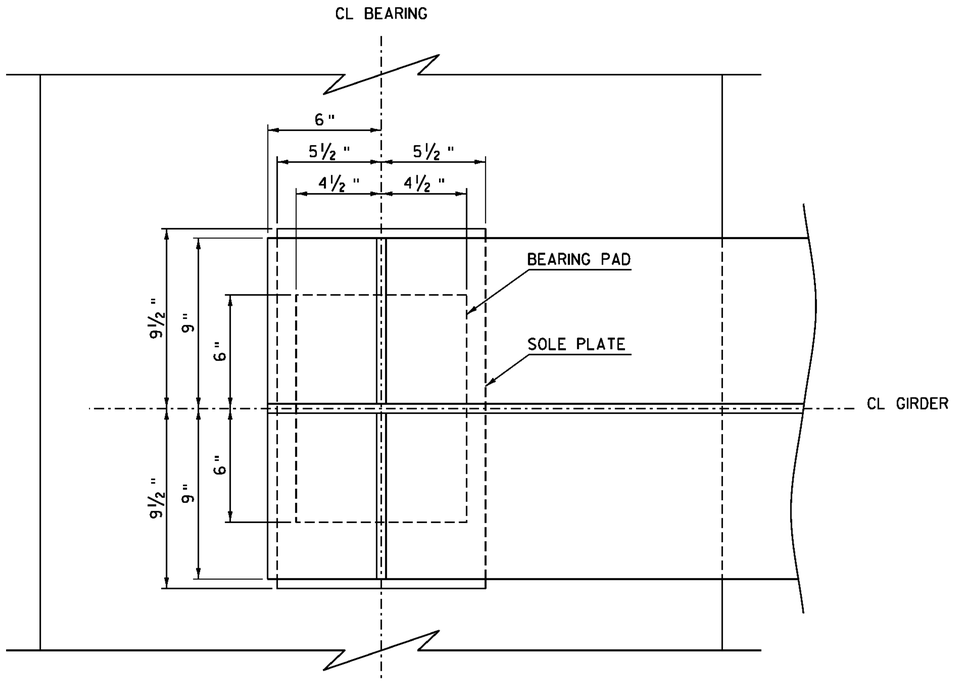
B) HORIZONTAL CAPACITY SHALL BE MINIMUM OF 20% VERTICAL LOAD IN ANY UNRESTRAINED DIRECTION.

C) DESIGN LOAD PER BEARING

ABUTMENTS 1&2	RDL = 54.1 KIPS
	RLL = 0.0 KIPS
PIER 1&2	RDL = 109.6 KIPS
	RLL = 128.1 KIPS

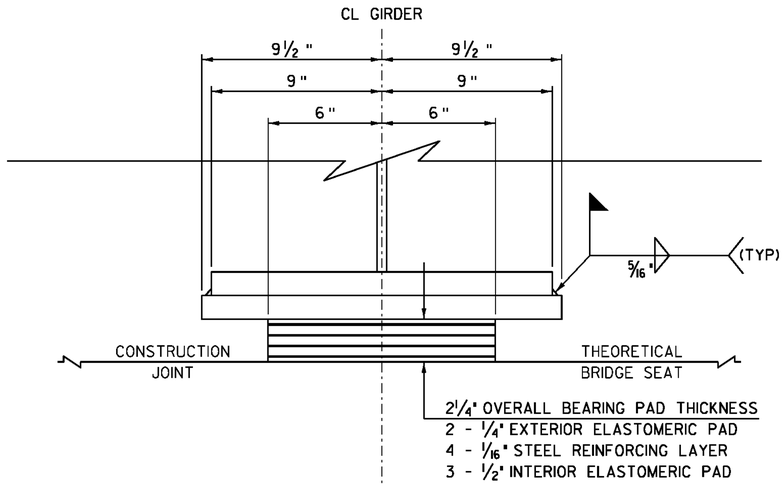
D) NO FABRIC REINFORCEMENT WILL BE ALLOWED IN ELASTOMERIC PADS

PROJECT NAME:	NEWPORT CITY
PROJECT NUMBER:	BRO 1449(25)
FILE NAME: 96j314bearing.dgn	PLOT DATE: 22-NOV-2011
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: D. PETERSON	CHECKED BY: D. PETERSON
BEARING NOTES SHEET	SHEET 37 OF 75



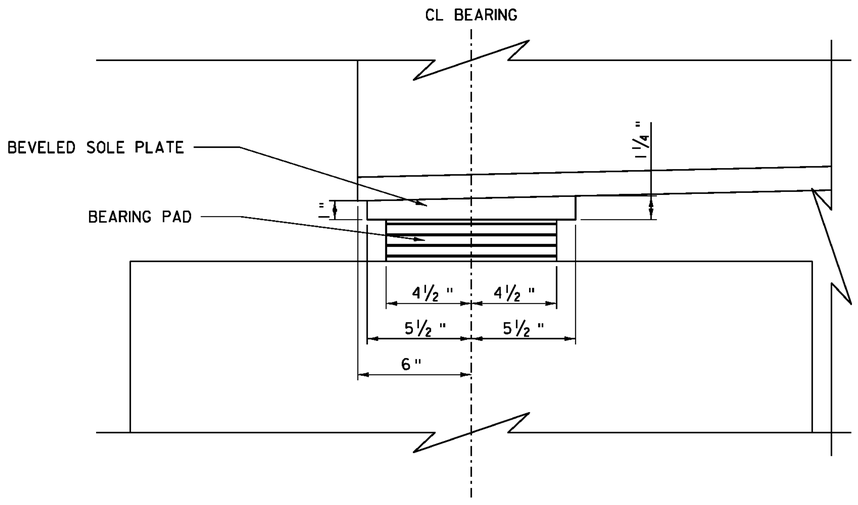
BEARING PLAN

SCALE: 3" = 1'-0"



BEARING SECTION

SCALE: 3" = 1'-0"



BEARING ELEVATION

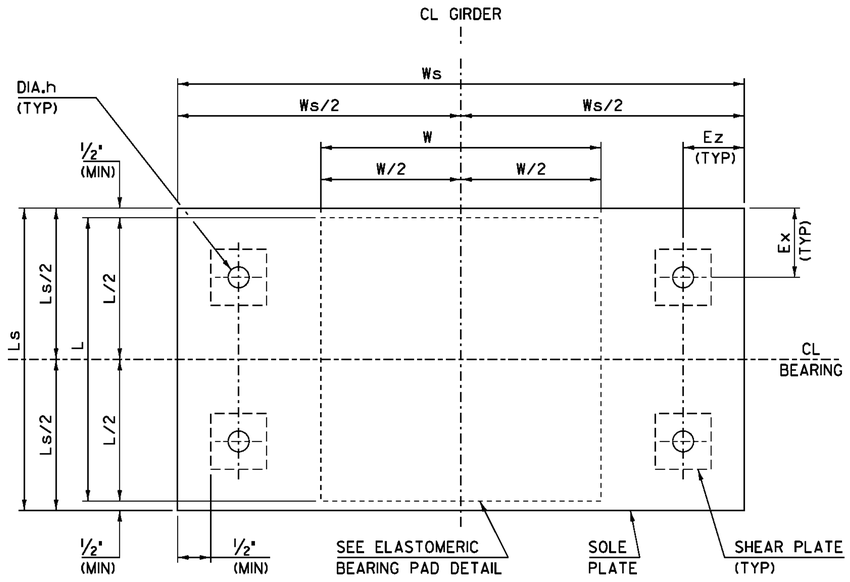
SCALE: 3" = 1'-0"

NOTE:

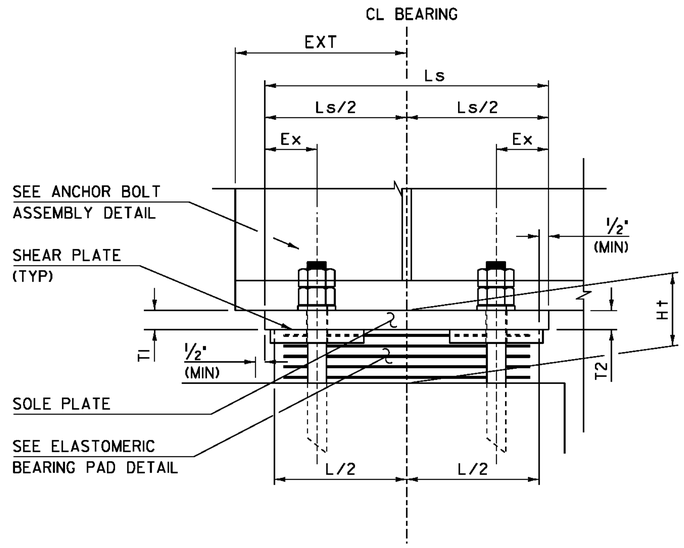
1. BEARING DETAILED AS PRIOR TO PLACEMENT OF ABUTMENT CAP.
2. SOLE PLATE BEVEL SHOULD BE ORIENTED SO THAT THE BEVEL MATCHES THE CAMBER OF THE GIRDER.

PROJECT NAME:	NEWPORT CITY
PROJECT NUMBER:	BRO 1449(25)

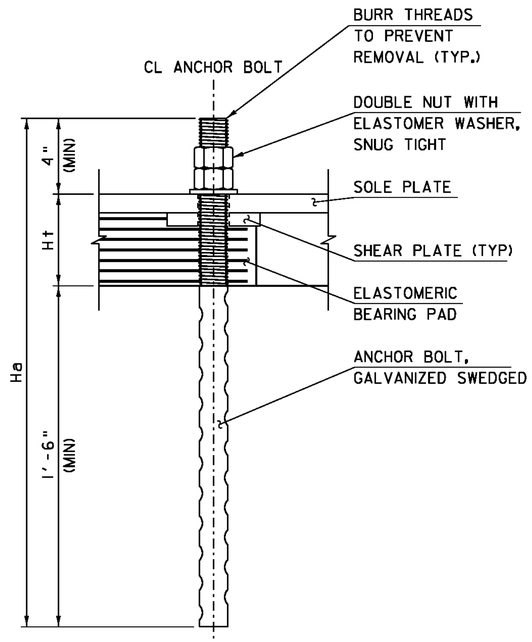
FILE NAME: S96J314abutbearing.dgn	PLOT DATE: 22-NOV-2011
PROJECT LEADER: C. CARLSON	DRAWN BY: I. DEGUTIS
DESIGNED BY: D. PETERSON	CHECKED BY: D. PETERSON
INTEGRAL ABUTMENT BEARING DETAILS	SHEET 38 OF 75



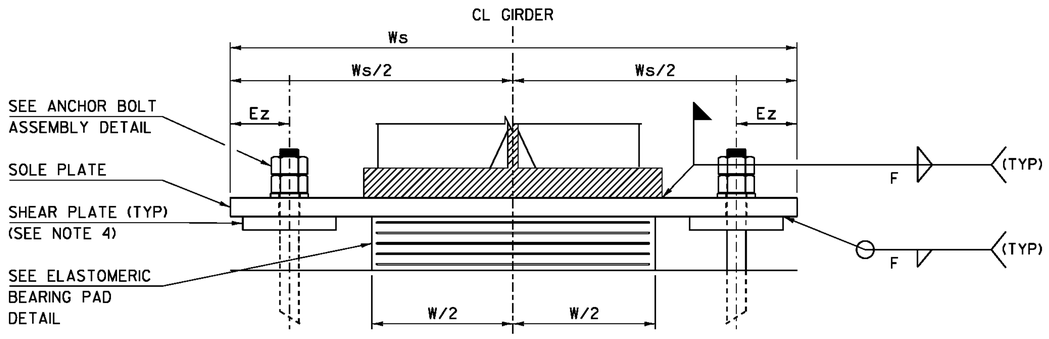
FIXED PIER BEARING TYPICAL PLAN
(NTS)



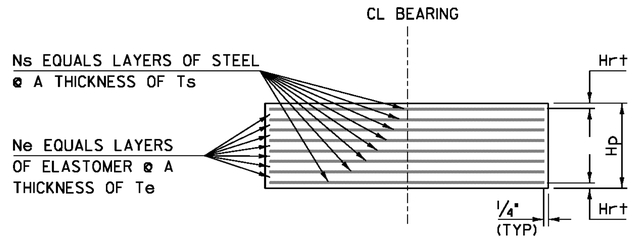
FIXED PIER BEARING TYPICAL SECTION
(NTS)



ANCHOR BOLT ASSEMBLY DETAIL
(NTS)



FIXED PIER BEARING TYPICAL ELEVATION
(NTS)



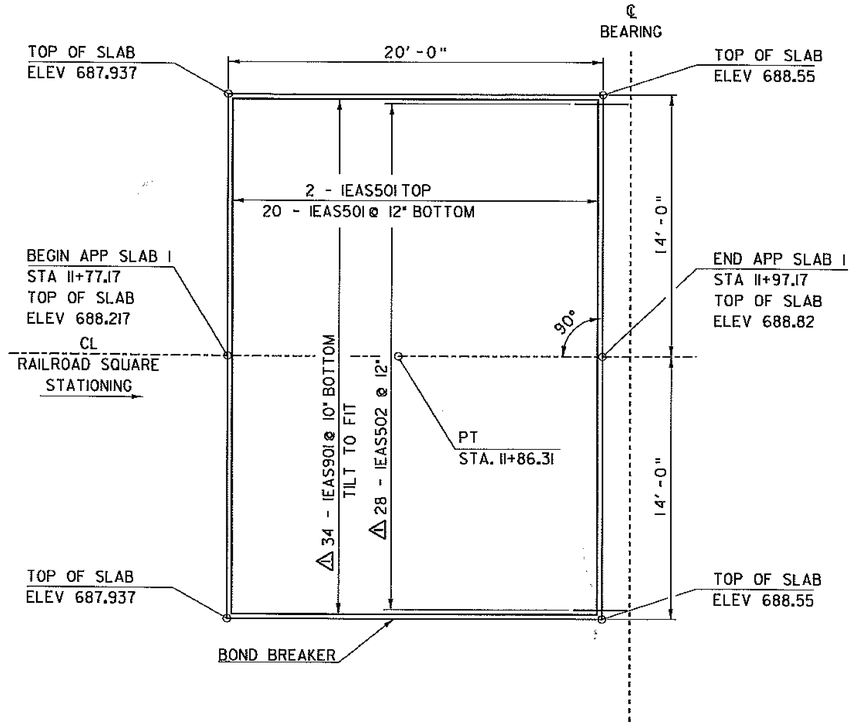
ELASTOMERIC BEARING PAD DETAIL
(NTS)

NOTES
1. THE TOTAL HEIGHT OF THE ELASTOMER LAYERS AND STEEL LAMINATIONS: Hp=2(Hrt)+Ns(Ts)+Ne(Te)
2. THE TOTAL HEIGHT OF THE ANCHOR BOLT: Ha=(1'-6")+Ht+(4")
3. VERIFY THAT BRIDGE SEAT WIDTH PROVIDES SUFFICIENT CONCRETE COVER FOR ANCHOR BOLTS.
4. SHEAR PLATES (TO REINFORCE SOLE PLATE) ARE 5" X 5 "X 3"
5. DIA.h=DIA.a+⅜"

FIXED ELASTOMERIC BEARING TABLE

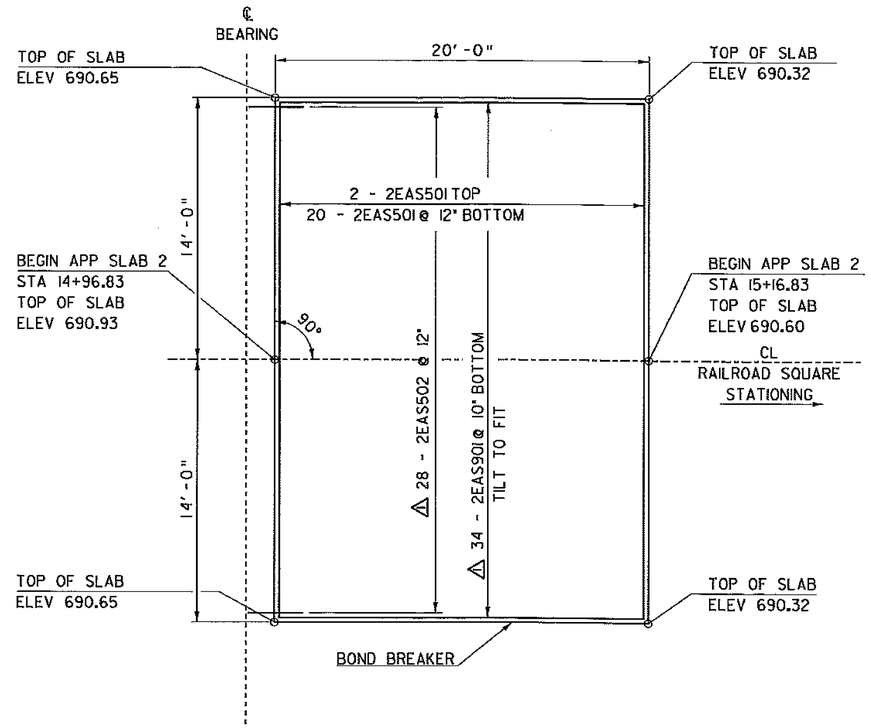
LOCATION	QUANTITY REQUIRED	DL+SDL (kips)	LL W/O IMP. (kips)	TOTAL DESIGN REACTION (kips)	ELASTOMERIC PAD								ANCHOR BOLTS			ANCHOR BOLT HOLES			WELD SIZE	SOLE PLATE				BRG.
					L	W	Ns	Ts	Ne	Te	Hrt	Hp	STUDS/BRG.	DIA.a	Ha	DIA.h	Ez	Ex	F	Ws	Ls	T1	T2	Ht
PIER #1	5	109.6	128.1	237.7	14.25"	18"	8	0.0625"	7	0.5"	0.25"	4.5"	4	1 1/2"	28"	1 7/8"	3.5"	3.5"	5/16"	33"	16.25"	1"	1.25"	5.625"
PIER #2	5	109.6	128.1	237.7	14.5"	20.5"	6	0.0625"	5	0.625"	0.375"	4.25"	4	1 1/2"	28"	1 7/8"	3.5"	3.5"	5/16"	35.5"	16.5"	1"	1"	5.25"

PROJECT NAME:	NEWPORT CITY
PROJECT NUMBER:	BRO 1449(25)
FILE NAME: 96314bearing.dgn	PLOT DATE: 22-NOV-2011
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: D. PETERSON	CHECKED BY: D. PETERSON
PIER BEARINGS DETAIL SHEET	SHEET 39 OF 75



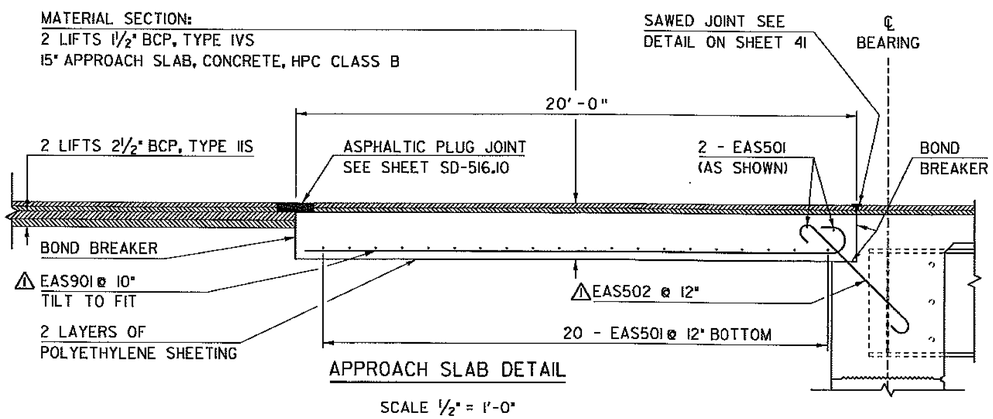
APPROACH SLAB 1 PLAN

SCALE 1/4" = 1'-0"



APPROACH SLAB 2 PLAN

SCALE 1/4" = 1'-0"



APPROACH SLAB DETAIL

SCALE 1/2" = 1'-0"

NOTES:

1. SUBBASE. COMPACT THE SUBBASE IN THE AREA UNDER THE APPROACH SLAB TO A SMOOTH SURFACE.

2. POLYETHYLENE SHEETING. MATERIAL FOR POLYETHYLENE SHEETING SHALL MEET THE REQUIREMENTS OF SUBSECTION 725.01(c) OF THE STANDARD SPECIFICATIONS. THE SHEETING THICKNESS SHALL BE 0.30 MILLIMETERS (.012 INCHES). PLACE THE SHEETING ON TOP OF THE FINISHED SUBBASE FOR THE FULL LENGTH AND WIDTH OF THE APPROACH SLAB, EXCEPT IN THE BRACKET AREA AT THE ABUTMENT. LAP SHEETING AT LEAST 600 MILLIMETERS. PAYMENT FOR ITEM 501.34 "CONCRETE, HIGH PERFORMANCE CLASS B" SHALL INCLUDE THIS SHEETING.

3. CONCRETE. POUR APPROACH SLAB CONCRETE IN THE EARLY MORNING BEFORE THE SUPERSTRUCTURE EXPANDS.

4. BOND BREAKER. APPLY 2 COATS TAR EMULSION. PAYMENT FOR ITEM 501.34 "CONCRETE, HIGH PERFORMANCE CLASS B" SHALL INCLUDE THIS BOND BREAKER.

5. PLACE HOOKED ENDS OF BOTTOM STEEL RUNNING PARALLEL TO CENTERLINE AT ABUTMENT END OF SLAB.

6. ALL ELEVATIONS ARE AT THE TOP OF APPROACH SLAB, NOT THE FINISH GRADE.

7. APPLY 2 COATS OF TAR EMULSION BOND BREAKER BETWEEN APPROACH SLAB AND CURB. INCLUDE IN ITEM 501.34 "CONCRETE, HIGH PERFORMANCE CLASS B".

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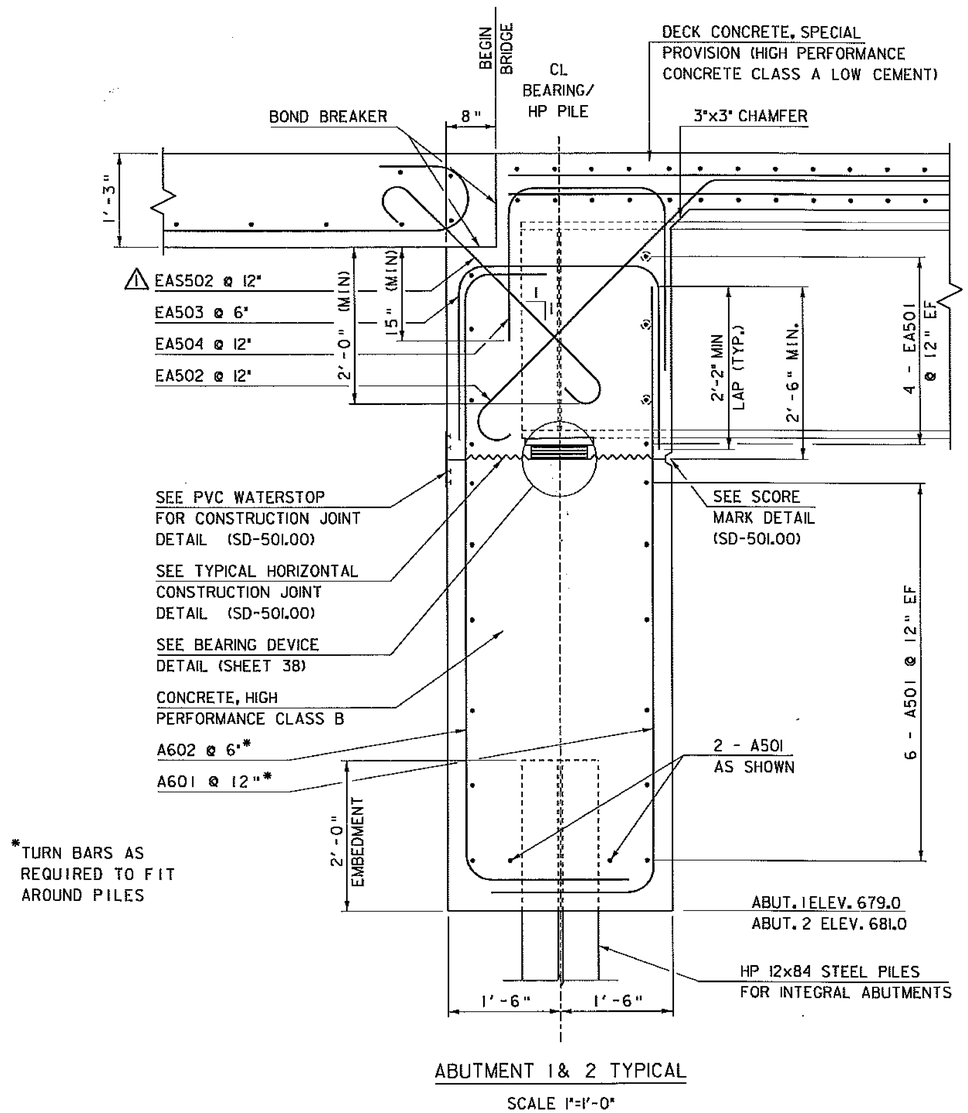
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

REV.	DESCRIPTION	DATE	REVISION BY
1	UPDATED REINFORCING SIZE/QUANTITY	3/7/2012	DRP

PROJECT NAME: NEWPORT CITY
PROJECT NUMBER: BRO 1449(25)

FILE NAME: str/96J314sup.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
APPROACH SLAB DETAIL SHEET

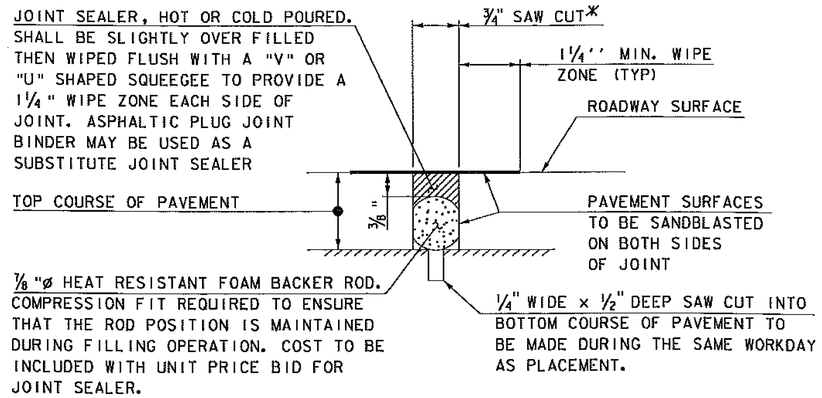
PLOT DATE: 08-MAR-2012
DRAWN BY: C. MOONEY
CHECKED BY: D. PETERSON
SHEET 40 OF 75



*TURN BARS AS REQUIRED TO FIT AROUND PILES

ABUTMENT 1& 2 TYPICAL

SCALE 1"=1'-0"



SAWED PAVEMENT JOINT DETAIL

(NOT TO SCALE)

*JOINT IS TO BE LOCATED ACCURATELY BY STRING LINING, OR OTHER MEANS, PRIOR TO PAVING, SO THAT THE SAW CUTS WILL BE MADE DIRECTLY OVER THE END OF CONCRETE DECK. JOINT SHALL BE CUT DRY IN A SINGLE PASS AND BE SEALED WITHIN 24 HOURS OR PRIOR TO EXPOSURE TO TRAFFIC. JOINT SHALL BE CLEANED PRIOR TO APPLYING THE JOINT SEALER.

REV.	DESCRIPTION	DATE	REVISION BY
1	UPDATED REINFORCING SIZE/QUANTITY	3/7/2012	DRP

NOTE:

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EF = EACH FACE
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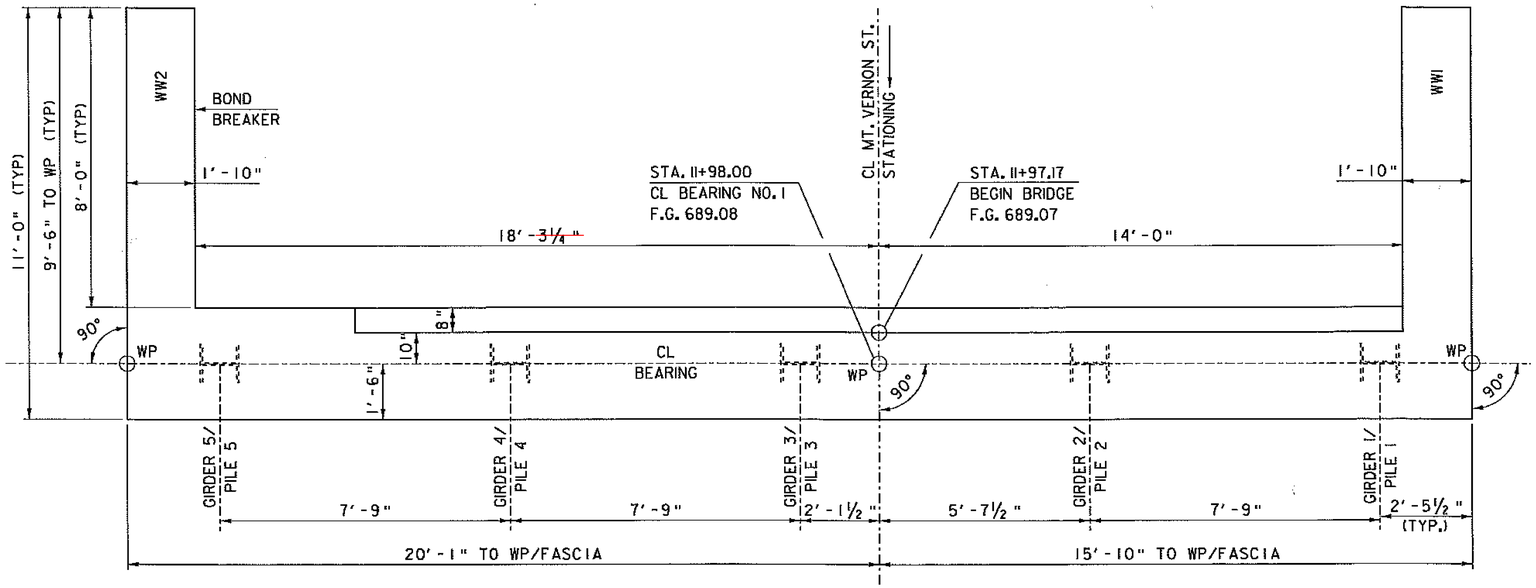
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

PROJECT NAME: NEWPORT CITY
PROJECT NUMBER: BRO 1449(25)

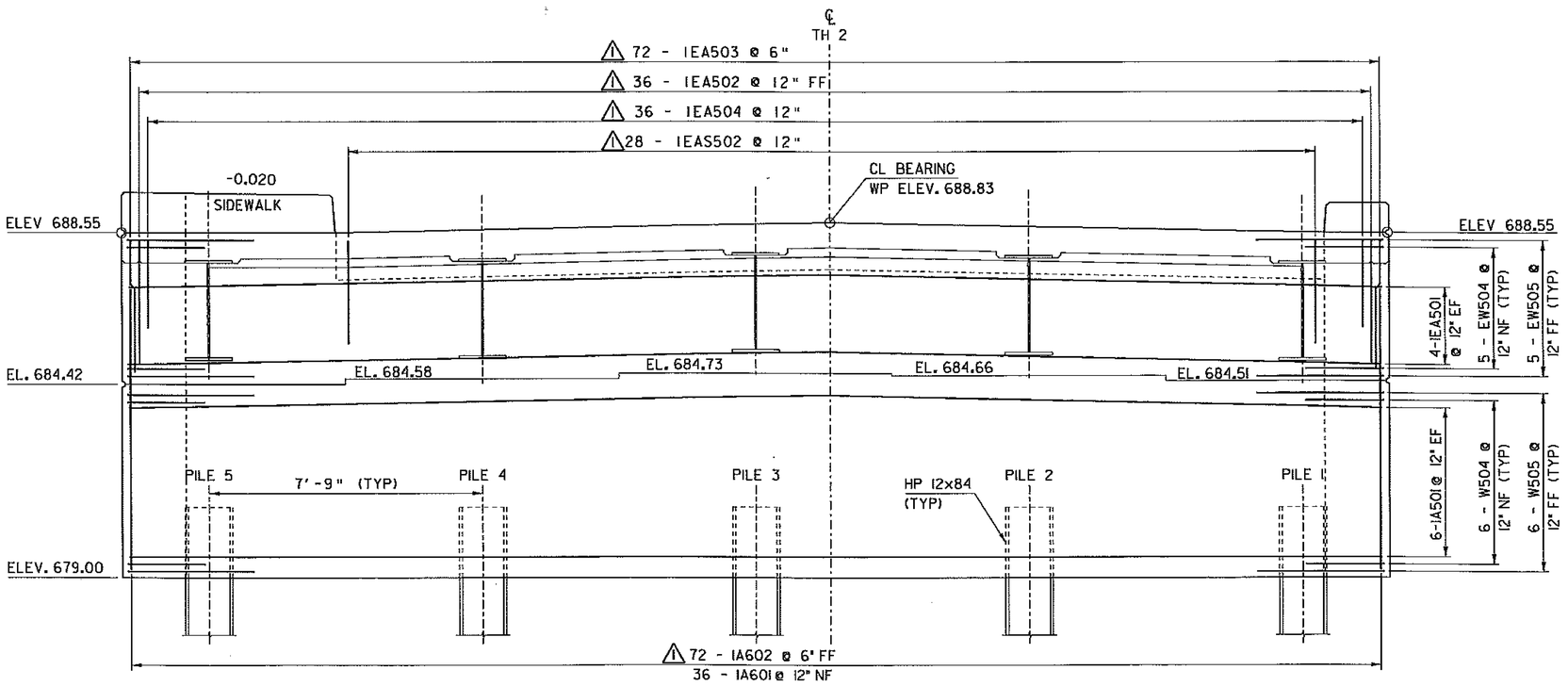
FILE NAME: s96j234sub.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
ABUTMENTS 1& 2 TYPICAL SHEET

PLOT DATE: 08-MAR-2012
DRAWN BY: C. MOONEY
CHECKED BY: D. PETERSON
SHEET 41 OF 75



INTEGRAL ABUTMENT NO. 1 PLAN

SCALE ½"=1'-0"



INTEGRAL ABUTMENT NO. 1 ELEVATION

SCALE ½"=1'-0"

NOTE:

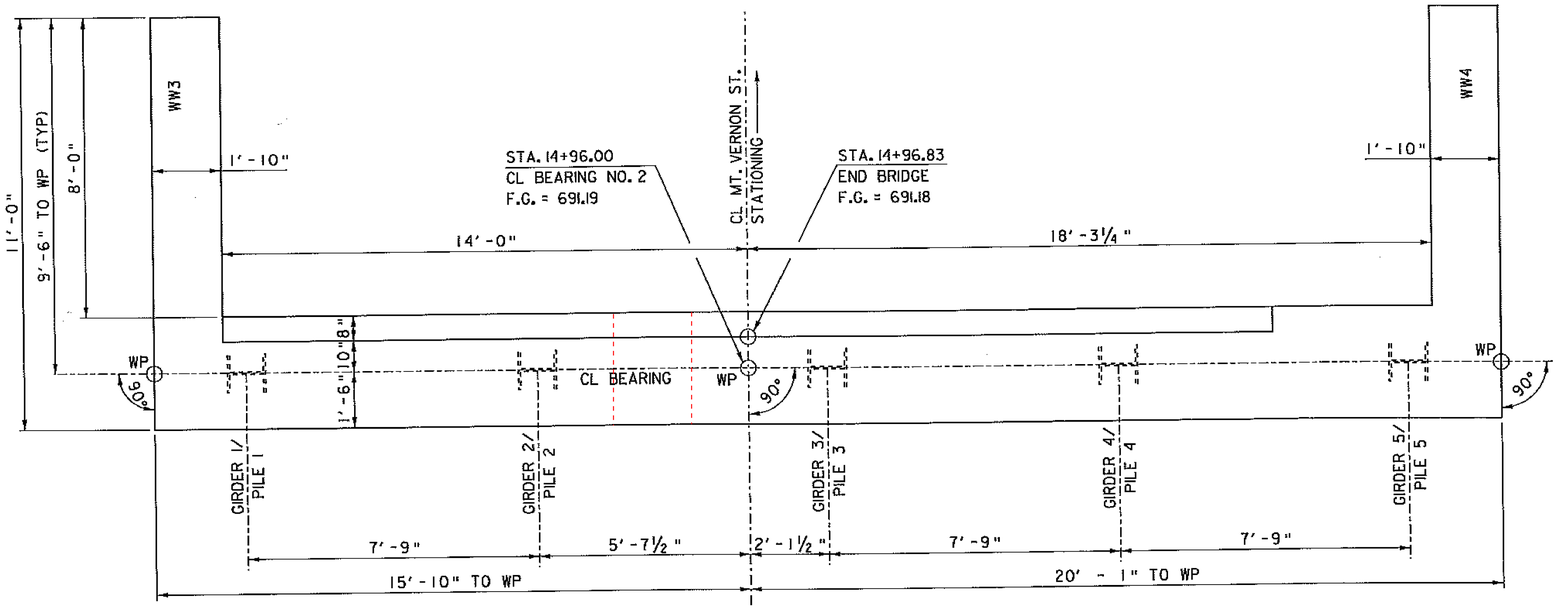
NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

REV.	DESCRIPTION	DATE	REVISION BY
⚠	UPDATED REINFORCING SIZE/QUANTITY	3/7/2012	DRP

PROJECT NAME: NEWPORT CITY
PROJECT NUMBER: BRO 1449(25)

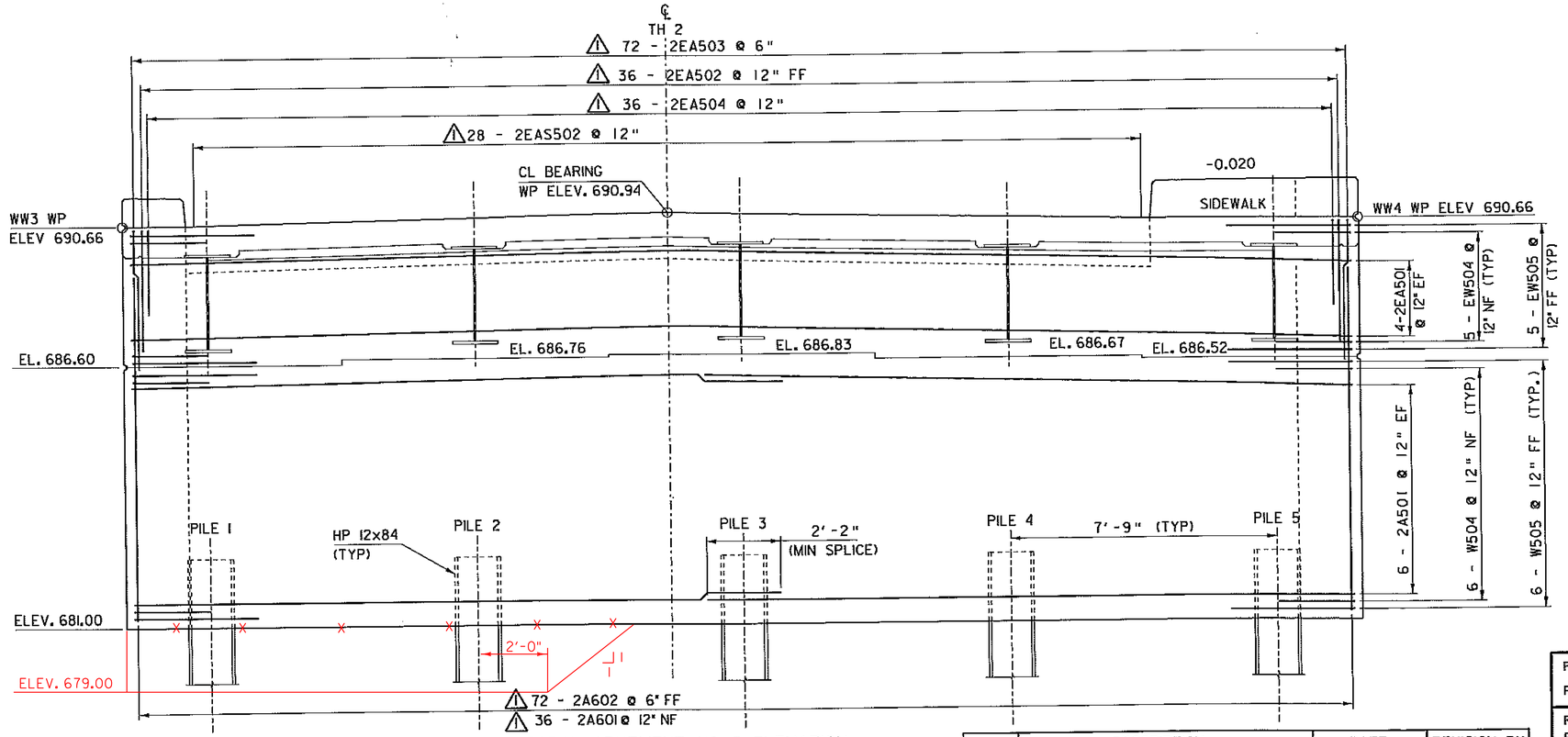
FILE NAME: s96j234sub.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
ABUTMENT 1PLAN AND ELEVATION

PLOT DATE: 08-MAR-2012
DRAWN BY: C. MOONEY
CHECKED BY: D. PETERSON
SHEET 42 OF 75



INTEGRAL ABUTMENT NO. 2 PLAN

SCALE ½"=1'-0"



INTEGRAL ABUTMENT NO. 2 ELEVATION

SCALE ½"=1'-0"

NOTE:

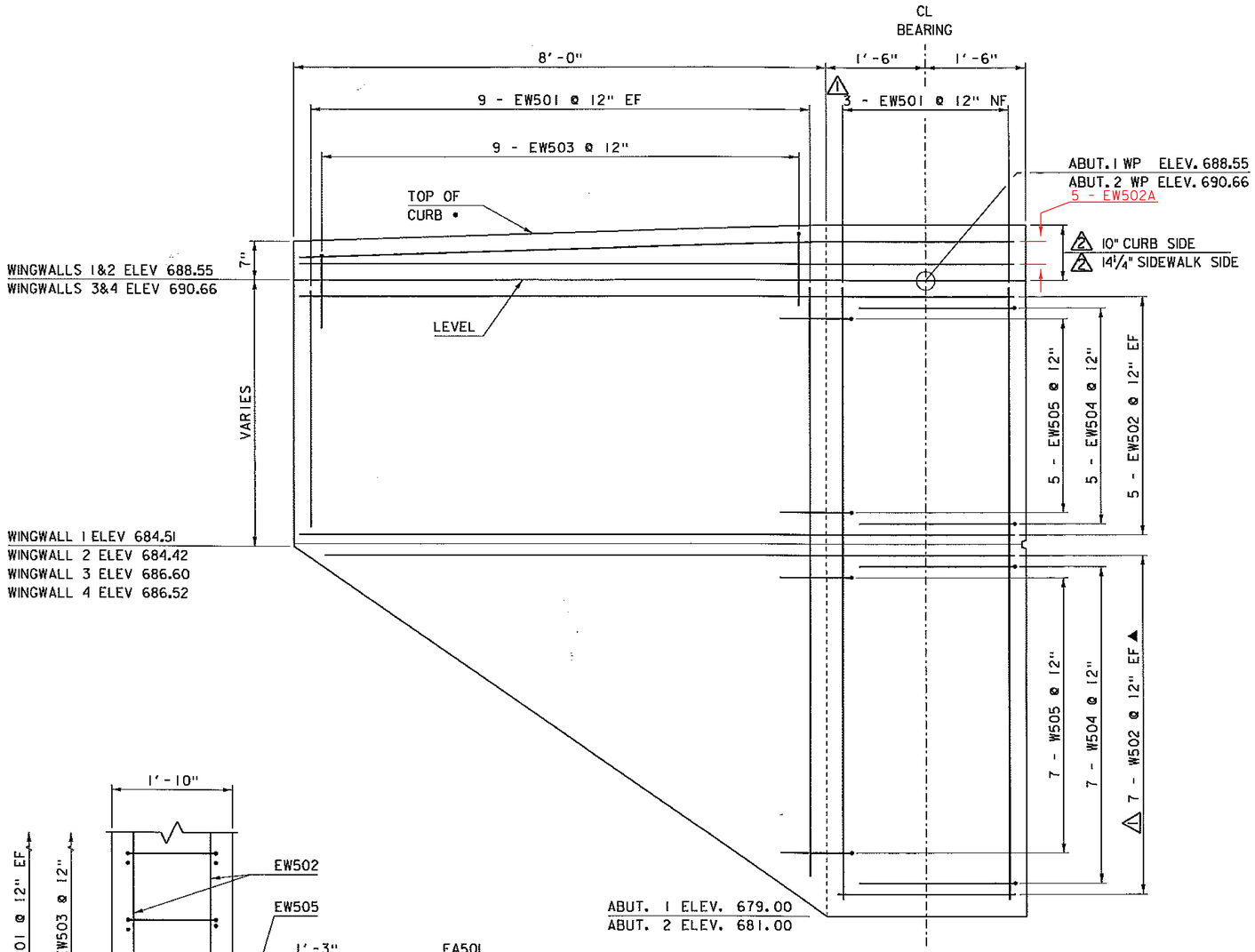
NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

REV.	DESCRIPTION	DATE	REVISION BY
⚠	UPDATED REINFORCING SIZE/QUANTITY	3/7/2012	DRP

PROJECT NAME: NEWPORT CITY
PROJECT NUMBER: BRO 1449(25)

FILE NAME: s96j234sub.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
ABUTMENT 2 PLAN AND ELEVATION

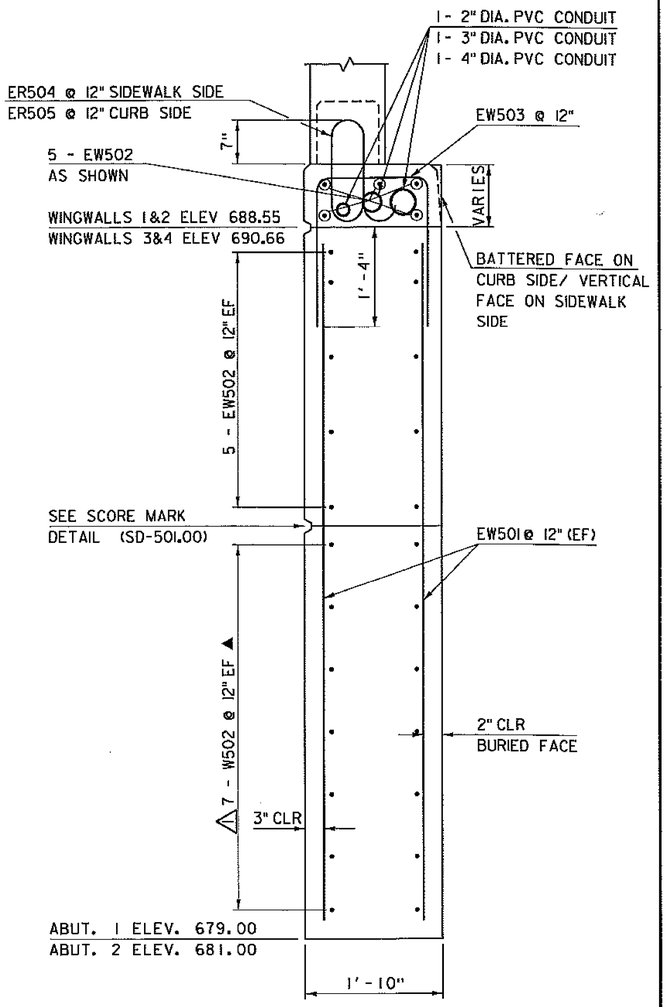
PLOT DATE: 08-MAR-2012
DRAWN BY: C. MOONEY
CHECKED BY: D. PETERSON
SHEET 43 OF 75



WINGWALLS TYPICAL ELEVATION

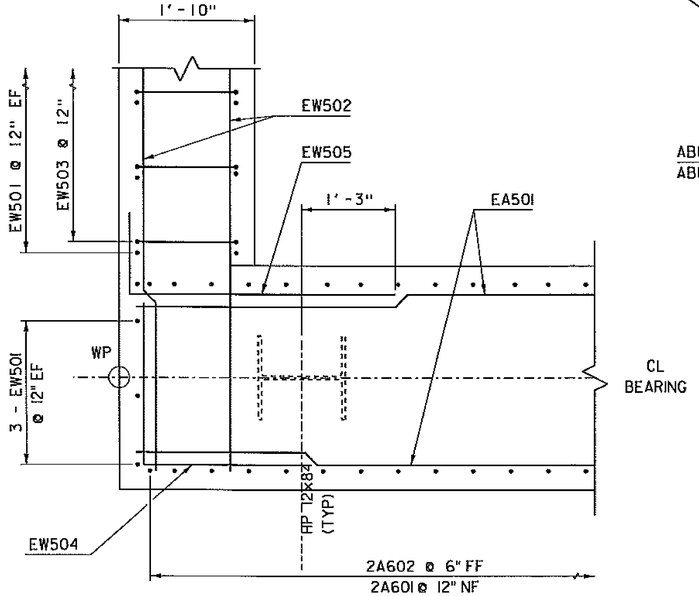
SCALE 1"=1'-0"

• SIDEWALK TAPER TO MATCH CURB TAPER (WINGWALLS 1& 2 ONLY)



WINGWALL TYPICAL SECTION

SCALE 1"=1'-0"



WINGWALL CORNER DETAIL

SCALE 1"=1'-0"

REV.	DESCRIPTION	DATE	REVISION BY
1	UPDATED REINFORCING SIZE/QUANTITY	3/8/2012	DRP
2	UPDATED DIMENSION NOTE	8/17/2012	DRP

NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

PROJECT NAME: NEWPORT CITY
PROJECT NUMBER: BRO 1449(25)

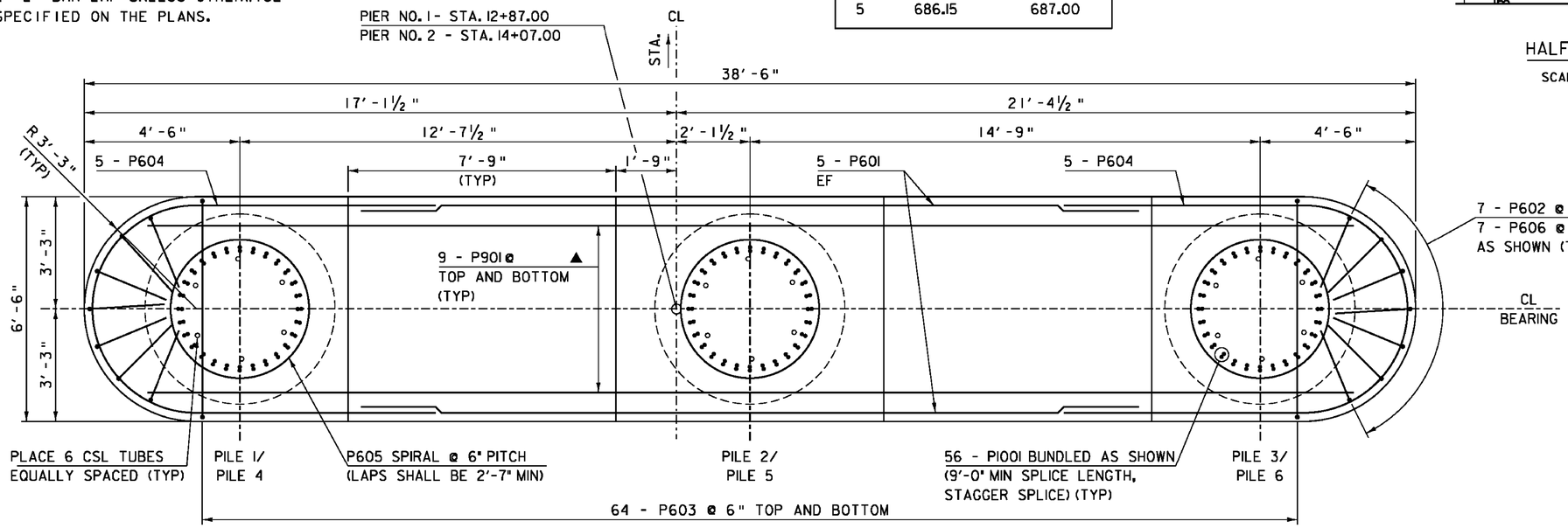
FILE NAME: s96j234sub.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
WINGWALL DETAIL SHEET

PLOT DATE: 17-AUG-2012
DRAWN BY: C. MOONEY
CHECKED BY: D. PETERSON
SHEET 44 OF 75

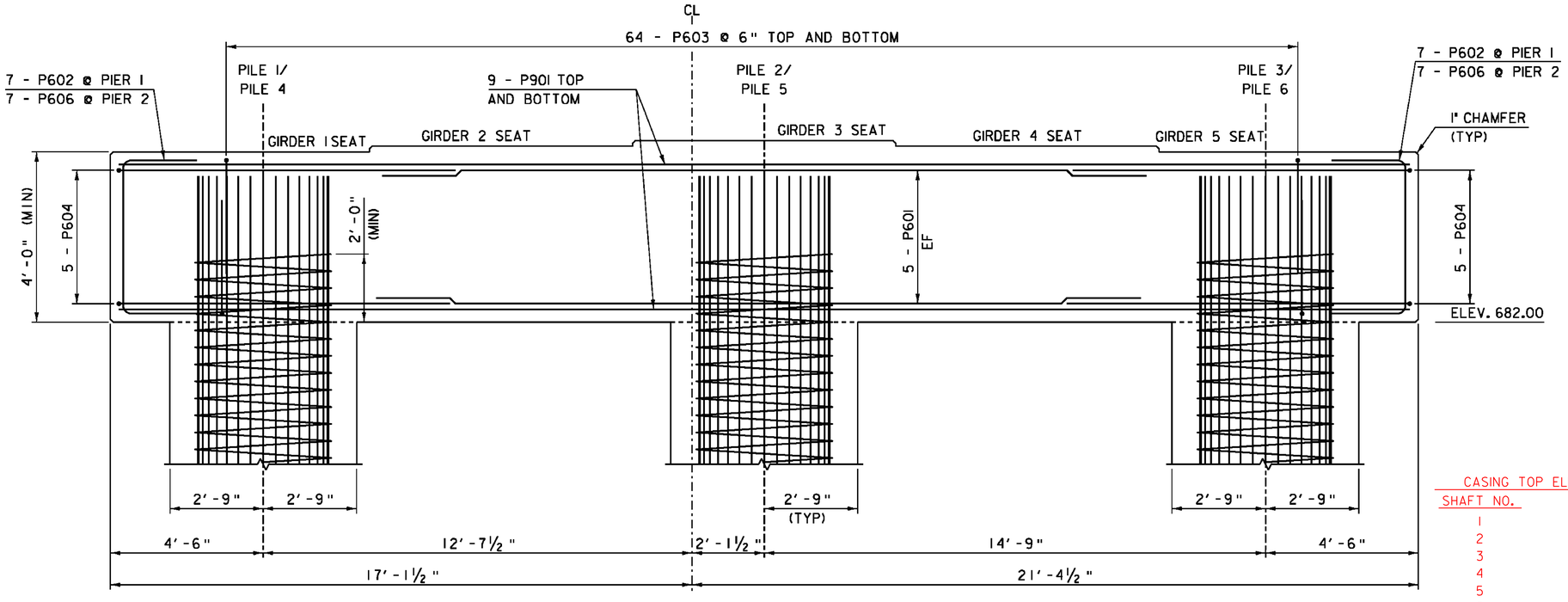
NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

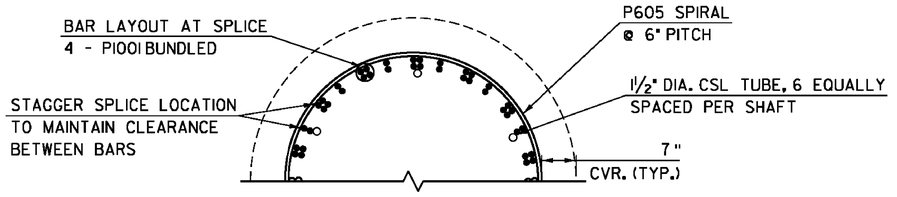
PIER SEAT ELEVATIONS		
GIRDER	PIER 1	PIER 2
1	686.24	687.08
2	686.39	687.24
3	686.46	687.31
4	686.31	687.15
5	686.15	687.00



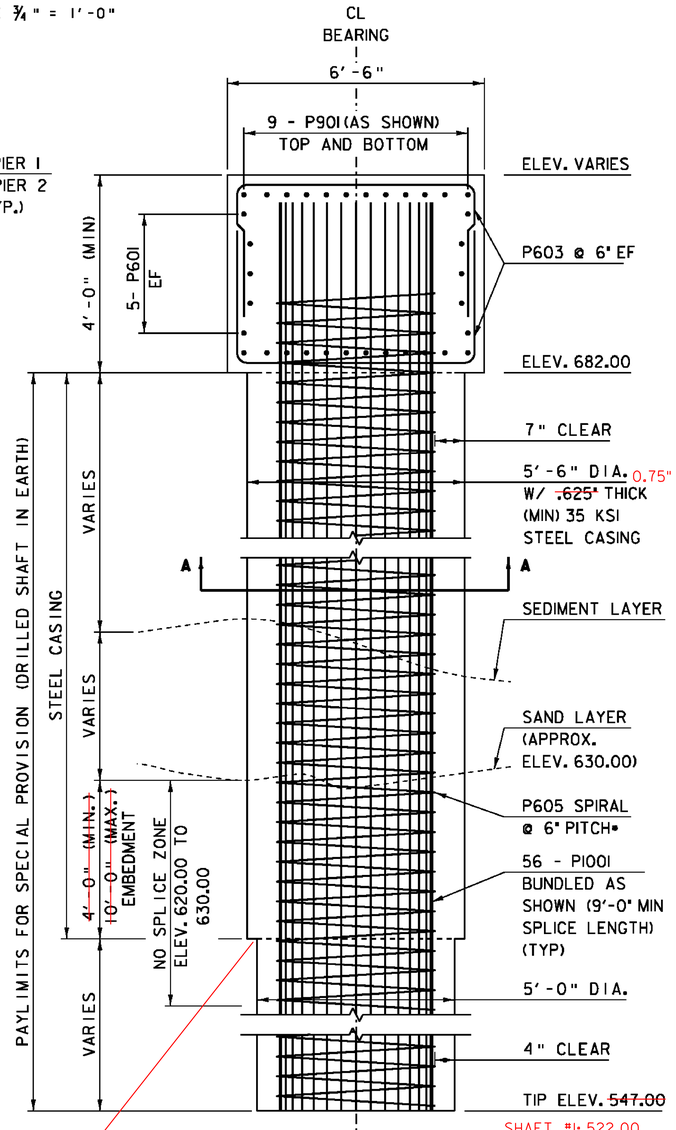
PIER TYPICAL PLAN
SCALE ½"=1'-0"



PIER TYPICAL ELEVATION
SCALE ½"=1'-0"



HALF SECTION A-A
SCALE ¾" = 1'-0"



PIER TYPICAL PLAN
SCALE ½"=1'-0"

CASING TOP ELEV.'S

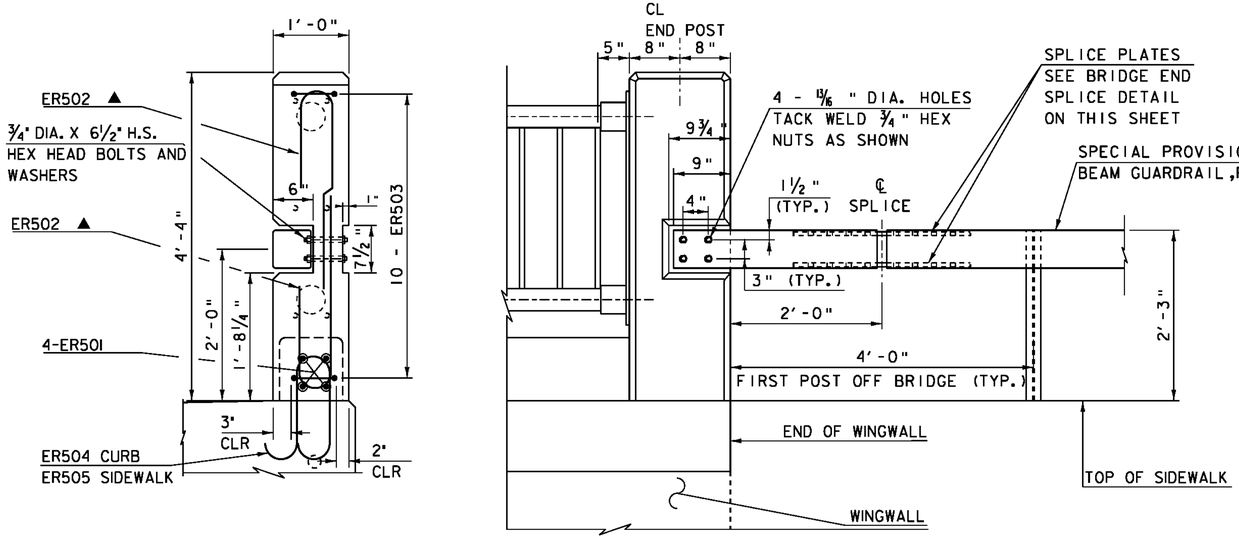
SHAFT NO.	ELEV.
1	542.90
2	546.06
3	547.90
4	562.83
5	563.17
6	566.40

NOTE - SEE DRILLED SHAFT EXCAVATION SUMMARIES
• LAPS SHALL BE 2'-7" (MIN)

PROJECT NAME: NEWPORT CITY
PROJECT NUMBER: BRO 1449(25)

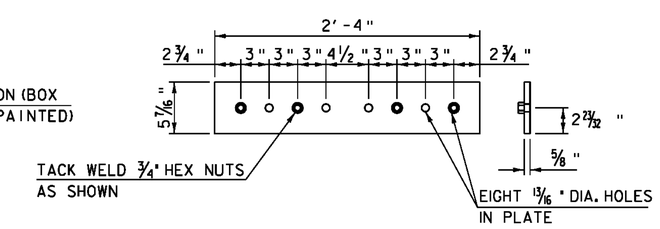
FILE NAME: s96j234sub.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
PIER DETAIL SHEET

PLOT DATE: 12-DEC-2011
DRAWN BY: C. MOONEY
CHECKED BY: D. PETERSON
SHEET 45 OF 75



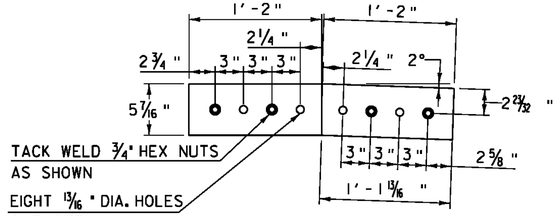
BOX BEAM TO BRIDGE RAIL CONNECTION DETAIL

SCALE 1" = 1'-0"



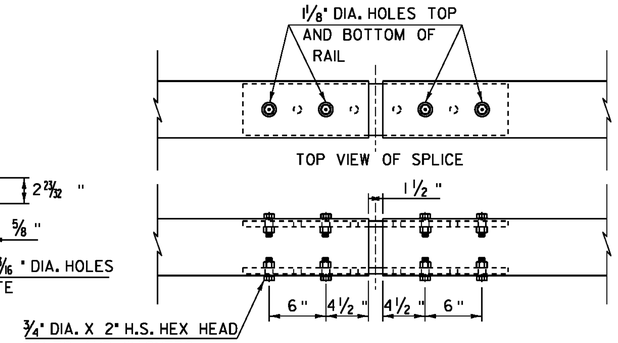
BRIDGE END SPLICE PLATE DETAIL

SCALE 1 1/2" = 1'-0"



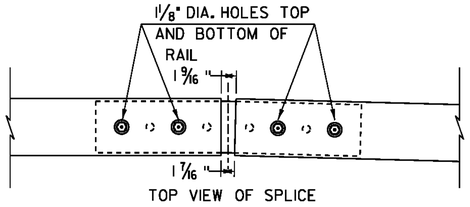
ANGLE BOX BEAM SPLICE PLATE DETAIL

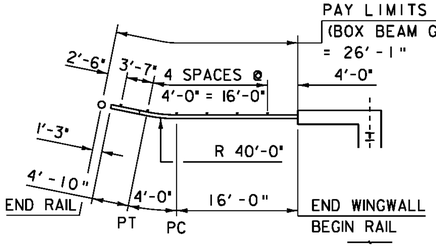
SCALE 1 1/2" = 1'-0"



BRIDGE END SPLICE INSTALLATION DETAIL

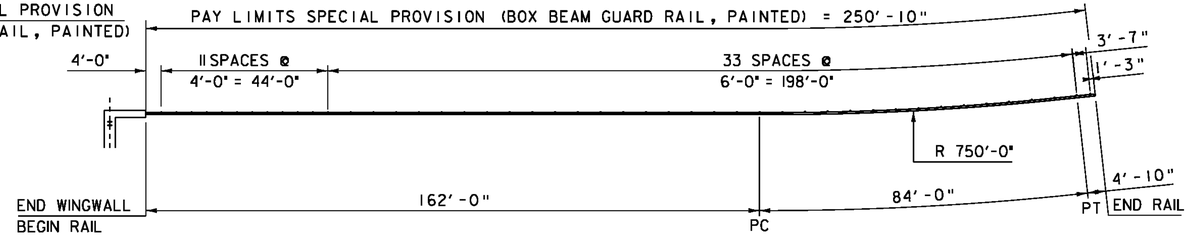
SCALE 1 1/2" = 1'-0"





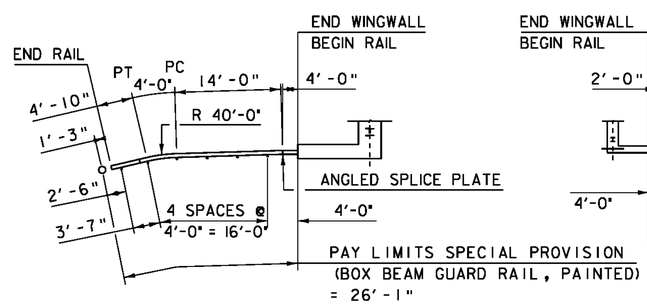
WINGWALL 1 APPROACH RAIL

SCALE 1" = 10'-0"



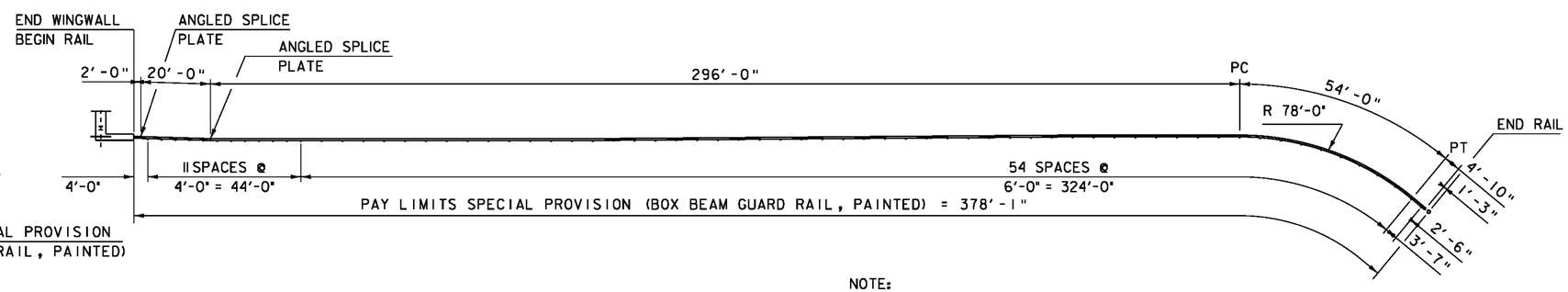
WINGWALL 3 APPROACH RAIL

SCALE 1" = 20'-0"



WINGWALL 2 APPROACH RAIL

SCALE 1" = 10'-0"



WINGWALL 4 APPROACH RAIL

SCALE 1" = 20'-0"

NOTE:
SPECIAL PROVISION (BOX BEAM GUARDRAIL, PAINTED) SHALL BE PAINTED BLACK (CHIP COLOR #27038)

NOTE:
THE BRIDGE END SPLICE DETAILS APPLY TO THE FIRST SPLICE OFF THE BRIDGE ON THE LEFT SIDE (WW1 AND WW3). THE ANGLED SPLICE DETAIL SHALL BE USED AS NOTED ON THE APPROACH RAIL LAYOUT.

PROJECT NAME: NEWPORT CITY
PROJECT NUMBER: BRO 1449(25)

FILE NAME: s96j3lapp rail.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
BOX BEAM GUARDRAIL LAYOUT

PLOT DATE: 02-DEC-2011
DRAWN BY: C. MOONEY
CHECKED BY: D. PETERSON
SHEET 46 OF 75

STATE OF VERMONT
AGENCY OF TRANSPORTATION

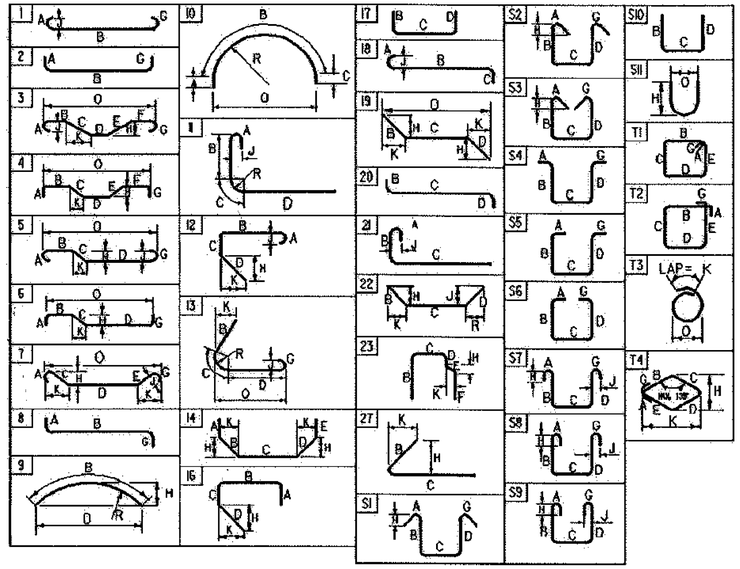
REINFORCING STEEL SCHEDULE

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
	DECK																
*	737	5	39'- 6"	ES501	STR												
△	1003	5	35'- 5"	ES502	STR												
	1202	5	4'- 4"	ES503	1	0'- 7"	3'- 9"					---					
△	302	5	4'- 6"	ES504	S5	0'- 6"	1'- 1"	1'- 4"	1'- 1"			0'- 6"					
△	302	5	9'- 2"	ES505	S5	0'- 6"	1'- 4"	5'- 7"	1'- 3"			0'- 6"					
	24	5	7'- 9"	ES506	2		3'- 3"	1'- 3"	3'- 3"								
	16	5	10'- 0"	ES507	3		2'- 2"	2'- 1"	1'- 6"	2'- 1"	2'- 2"		2'- 0"		0'- 6"		
*△	73	6	40'- 0"	ES601A	STR												
△	72	6	23'- 0"	ES601B	STR												
	APP. SLAB 1																
*△	23	5	27'- 6"	1EAS501	STR												
	28	5	5'- 2"	1EAS502	1	0'- 7"	4'- 0"					0'- 7"					
*△	35	9	20'- 9"	1EAS901	1	1'- 3"	19'- 6"					---					
	ABUTMENT 1																
*	9	5	35'- 5"	1EA501	STR												
△	36	5	7'- 11"	1EA502	12	0'- 7"	4'- 9"	---	2'- 7"				1'- 10"	1'- 10"			
△	72	5	7'- 3"	1EA503	17		2'- 4"	2'- 7"	2'- 4"								
△	36	5	7'- 5"	1EA504	17		2'- 7"	2'- 3"	2'- 7"								
	12	5	35'- 5"	1A501	STR												
△	36	6	11'- 6"	1A601	17		1'- 0"	7'- 11"	2'- 7"								
*△	73	6	10'- 8"	1A602	17		2'- 7"	8'- 1"	---								
	WINGWALL 1																
△	21	5	9'- 1"	1EW501	STR												
	10	5	10'- 6"	1EW502	STR												
	5	5	13'-6"	1EW502A	STR												
△	9	5	5' 8"	1EW503	S10		2' 2"	1' 4"	2' 2"								
	5	5	4'- 4"	1EW504	17		2'- 2"	2'- 2"	---								
	5	5	6'- 8"	1EW505	17		2'- 2"	4'- 6"	---								
△▲	14	5	10'- 3"	1W502	STR												
	7	5	4'- 4"	1W504	17		2'- 2"	2'- 2"									
	7	5	6'- 8"	1W505	17		2'- 2"	4'- 6"									
	WINGWALL 2																
△	21	5	9'- 1"	2EW501	STR												
	10	5	10'- 6"	2EW502	STR												
	5	5	13'-6"	2EW502A	STR												
△	9	5	5'- 8"	2EW503	S10		2'- 2"	1'- 4"	2'- 2"								
	5	5	4'- 4"	2EW504	17		2'- 2"	2'- 2"	---								
	5	5	6'- 8"	2EW505	17		2'- 2"	4'- 6"	---								
△▲	14	5	10'- 3"	2W502	STR												
	9	5	4'- 4"	2W504	17		2'- 2"	2'- 2"									
	9	5	6'- 8"	2W505	17		2'- 2"	4'- 6"									
	PIER 1																
*	11	6	22'- 6"	1P601	STR												
	14	6	5'- 6"	1P602	S10		1'- 0"	3'- 6"	1'- 0"								
△	128	6	13'- 0"	1P603	17		3'- 6"	6'- 0"	3'- 6"								
	10	6	23'- 7"	1P604	10	7'- 0"	9'- 7"	7'- 0"									
	3	6	3676'- 4"	1P605	T3										---		
*	19	9	34'- 8"	1P001	STR												
*	841	10	38'- 0"	1P1001	STR												

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
	APP. SLAB 2																
*△	23	5	27'- 6"	2EAS501	STR												
	28	5	5'- 2"	2EAS502	1	0'- 7"	4'- 0"					0'- 7"					
*△	35	9	19'- 6"	2EAS901	1	1'- 3"	19'- 6"					---					
	ABUTMENT 2																
*△	9	5	35'- 5"	2EA501	STR												
△	36	5	7'- 11"	2EA502	12	0'- 7"	4'- 9"	---	2'- 7"				1'- 10"	1'- 10"			
△	72	5	7'- 3"	2EA503	17		2'- 4"	2'- 7"	2'- 4"								
△	36	5	7'- 5"	2EA504	17		2'- 7"	2'- 3"	2'- 7"								
△	12	5	35'- 5"	2A501	STR												
△	36	6	11'- 6"	2A601	17		1'- 0"	7'- 11"	2'- 7"								
△	72	6	10'- 8"	2A602	17		2'- 7"	8'- 1"	---								
	WINGWALL 3																
△	21	5	9'- 3"	3EW501	STR												
	10	5	10'- 6"	3EW502	STR												
△	9	5	5' 8"	3EW503	S10		2' 2"	1' 4"	2' 2"								
	5	5	4'- 4"	3EW504	17		2'- 2"	2'- 2"	---								
	5	5	6'- 8"	3EW505	17		2'- 2"	4'- 6"	---								
△▲	14	5	10'- 3"	3W502	STR												
	9	5	4'- 4"	3W504	17		2'- 2"	2'- 2"									
	9	5	8'- 2"	3W505	17		2'- 2"	6'- 0"									
	WINGWALL 4																
△	21	5	9'- 3"	4EW501	STR												
	10	5	10'- 6"	4EW502	STR												
△	9	5	5'- 8"	4EW503	S10		2'- 2"	1'- 4"	2'- 2"								
	5	5	4'- 4"	4EW504	17		2'- 2"	2'- 2"	---								
	5	5	6'- 8"	4EW505	17		2'- 2"	4'- 6"	---								
△▲	14	5	10'- 3"	4W502	STR												
	9	5	4'- 4"	4W504	17		2'- 2"	2'- 2"									
	9	5	8'- 2"	4W505	17		2'- 2"	6'- 0"									
	PIER 2																
*	11	6	22'- 6"	2P601	STR												
△	128	6	13'- 0"	2P603	17		3'- 6"	6'- 0"	3'- 6"								
	10	6	23'- 7"	2P604	10	7'- 0"	9'- 7"	7'- 0"									
	3	6	3676'- 4"	2P605	T3										---		
	14	6	6'- 6"	2P606	S10		1'- 0"	4'- 6"	1'- 0"								
*	19	9	34'- 8"	2P901	STR												
*	841	10	38'- 0"	2P1001	STR												
	BRIDGE RAIL																
*	73	5	37'- 4"	ER501	STR												
▲	264	5	6'- 6"	ER502	S11										3'- 3"		0'- 10"
	660	5	3'- 4"	ER503	T2	0'- 4"	0'- 10"	0'- 6"	0'- 10"	0'- 6"		0'- 4"					
	350	5	4'- 3"	ER504	S5	0'- 6"	1'- 5"	0'- 5"	1'- 5"			0'- 6"					
	350	5	3'- 9"	ER505	S5	0'- 6"	1'- 2"	0'- 5"	1'- 2"			0'- 6"					

~ NOTES ~

1. UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE IN SIZES UP TO AND INCLUDING NO. 18 SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR DEFORMED BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT", AASHTO M31 (ASTM A 615-SI). ALL BARS SHALL BE GRADE 60, UNLESS OTHERWISE DESIGNATED.
2. FOR TYPICAL BENDING DETAILS, RECOMMENDED PIN DIAMETER "D" OF BENDS AND HOOKS, AND OTHER STANDARD PRACTICE, SEE CURRENT CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE".
3. BARS WHICH REQUIRE MORE ACCURATE BENDING THAN STANDARD PRACTICES SHOULD HAVE LIMITS INDICATED.
4. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" AND "G" ON STANDARD 180 DEGREE AND 135 DEGREE HOOKS.
5. "J" DIMENSION ON 180 DEGREE HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE. OTHERWISE, STANDARD HOOKS ARE TO BE USED.
6. "H" DIMENSION ON STIRRUPS TO BE SHOWN ONLY WHEN NECESSARY TO MAINTAIN CLEARANCES.
7. WHERE SLOPE DIFFERS FROM 45 DEGREES, DIMENSIONS "H" AND "K" MUST BE SHOWN.
8. ▲ DENOTES BARS TO BE CUT IN FIELD.
9. * DENOTES ONE EXTRA BAR ADDED FOR TESTING PURPOSES.
10. △ DENOTES TWO EXTRA BARS ADDED FOR TESTING PURPOSES.
11. E IN BAR MARK PREFIX DENOTES EPOXY COATED REINFORCING STEEL.



ASTM STANDARD REINFORCING BARS

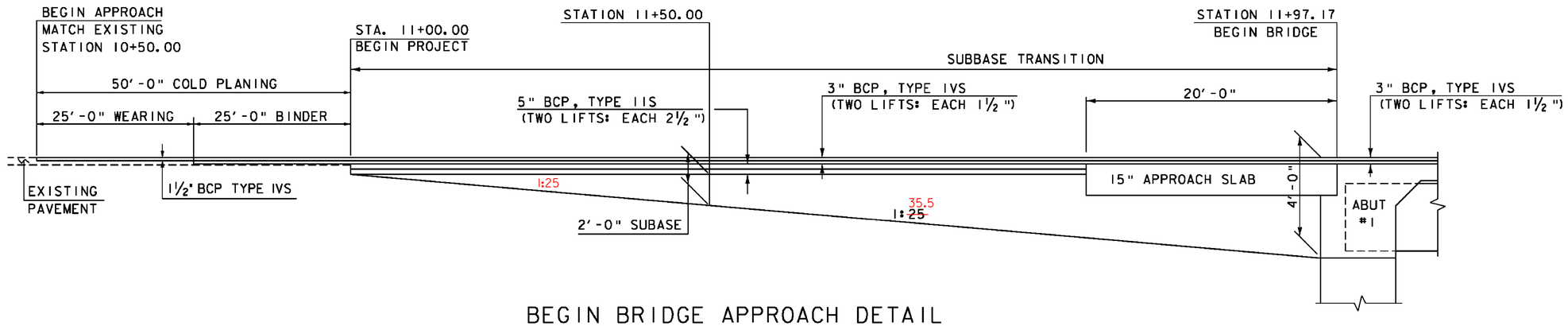
BAR SIZE DESIGNATION	WEIGHT POUNDS PER FOOT	NOMINAL DIMENSIONS ROUND SECTION: DIAMETER INCHES	AREA INCHES²	PERIMETER INCHES
#3	0.376	0.375	0.11	1.178
#4	0.668	0.500	0.20	1.571
#5	1.043	0.625	0.31	1.963
#6	1.502	0.750	0.44	2.356
#7	2.044	0.875	0.60	2.749
#8	2.670	1.000	0.79	3.142
#9	3.400	1.128	1.00	3.544
#10	4.303	1.270	1.27	3.990
#11	5.313	1.410	1.56	4.430
#14	7.65	1.693	2.25	5.32
#18	13.60	2.257	4.00	7.09

REV.	DESCRIPTION	DATE	REVISION BY
△	UPDATED REINFORCING SIZE/QUANTITY	3/7/2012	DRP

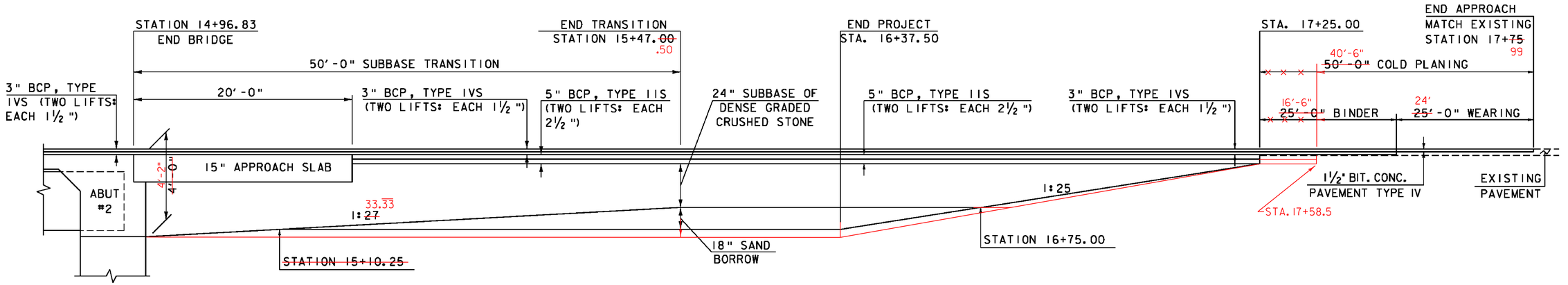
PROJECT NAME: NEWPORT CITY
PROJECT NUMBER: BRO 1449(25)

FILE NAME: 98I314__rss.xls
PROJECT MANAGER: C. CARLSON
DESIGNED BY: D. PETERSON
REINFORCING STEEL SCHEDULE SHEET

PLOT DATE: 3/9/2012
DRAWN BY: I. DEGUTIS
CHECKED BY: D. PETERSON
SHEET 47 OF 75



BEGIN BRIDGE APPROACH DETAIL
N. T. S.



END BRIDGE APPROACH DETAIL
N. T. S.

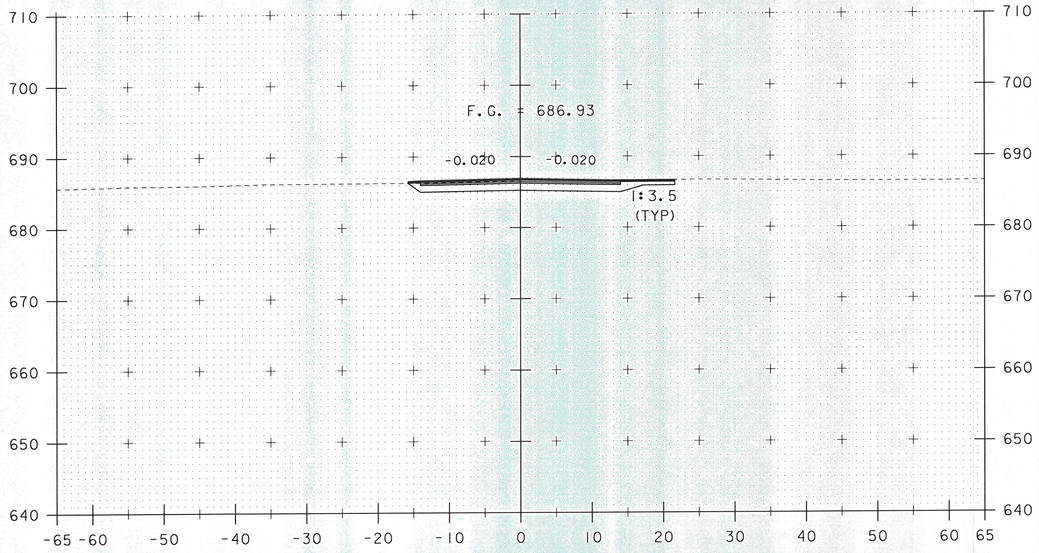
NOTE:
BCP SHALL BE READ AS BITUMINOUS CONCRETE PAVEMENT AND SHALL BE PAID FOR UNDER ITEM 900.680 "SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY) ".

10 0 10
SCALE: 1" = 10'-0"

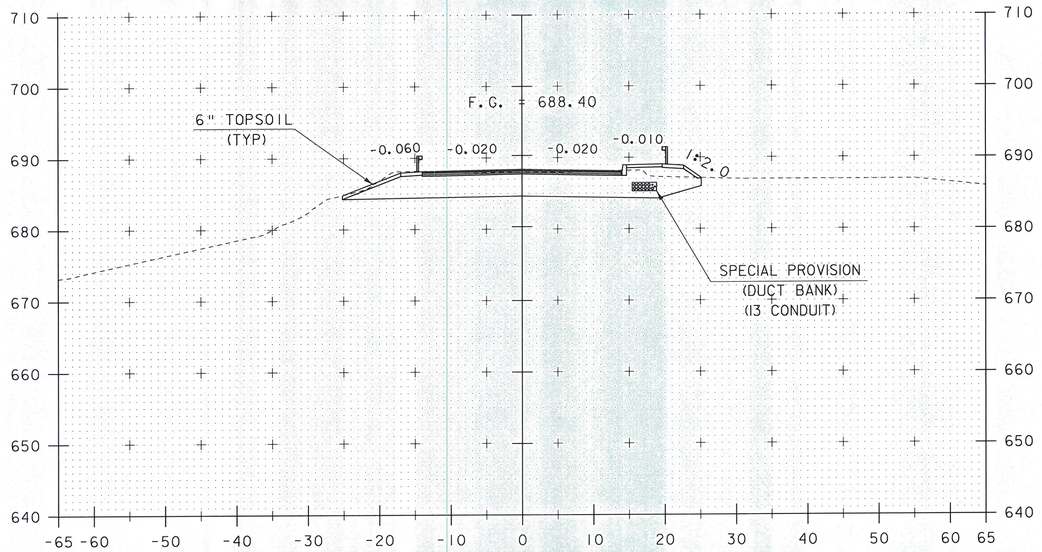
PROJECT NAME: NEWPORT CITY
PROJECT NUMBER: BRO 1449(25)

FILE NAME: 96j314/str3/sj314xsl.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: C. CARLSON
MATERIAL TRANSITION DIAGRAM

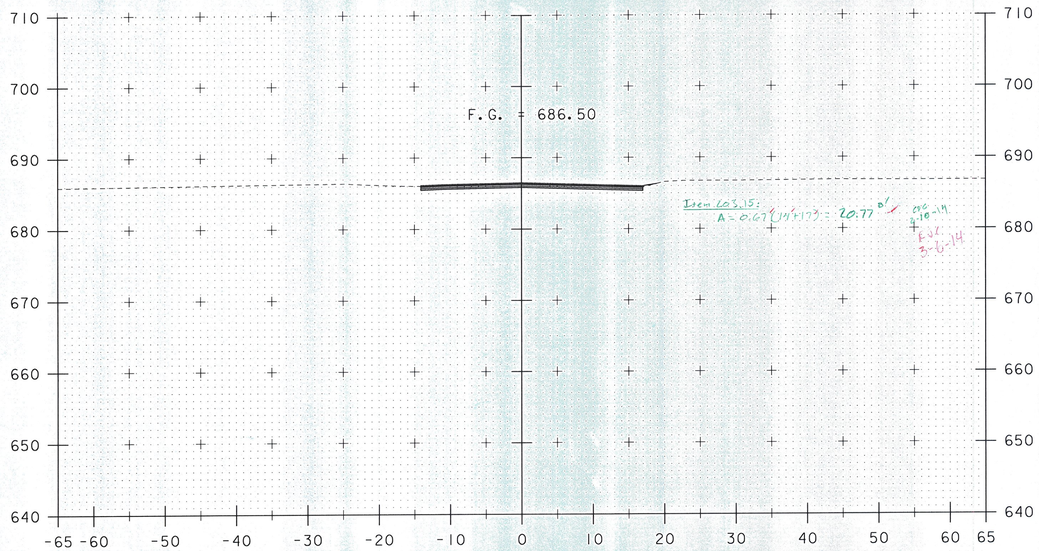
PLOT DATE: 22-NOV-2011
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 48 OF 75



11+25



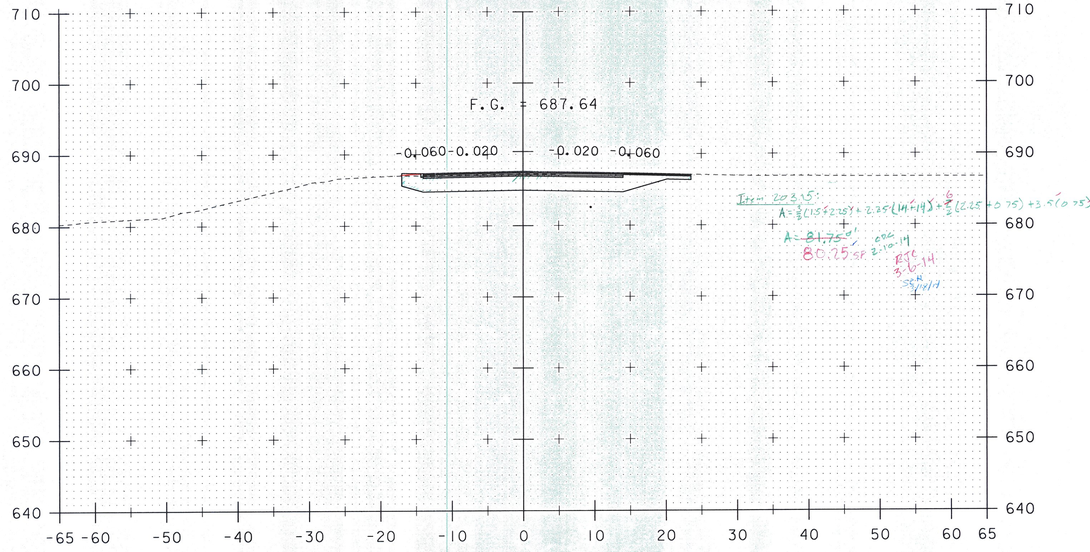
11+75



11+00 Beg. Item 203.15

STA. 11+00.00
END APPROACH
BEGIN PROJECT

STA. 10+50.00
BEGIN APPROACH
MATCH EXISTING



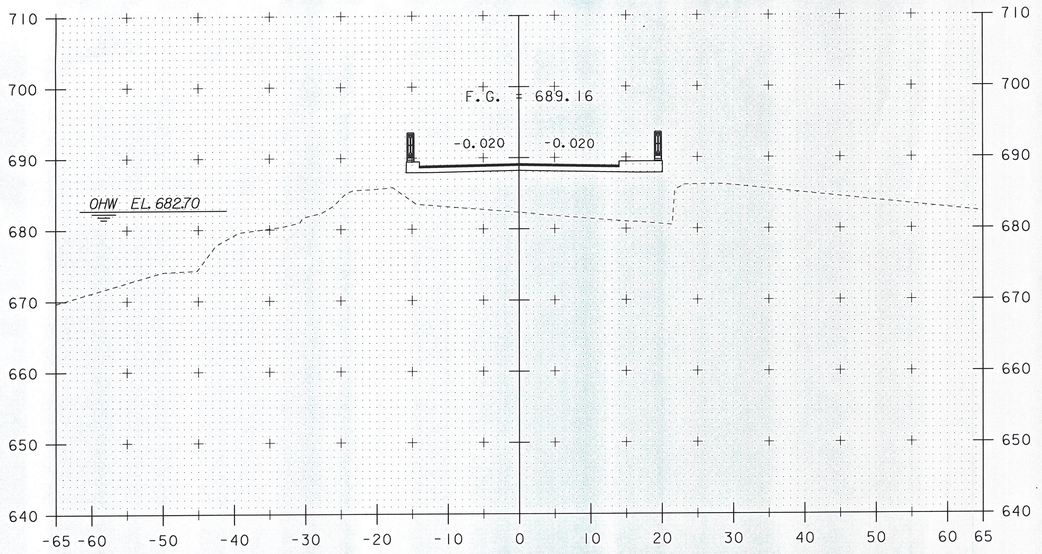
11+50

STA. 11+00 TO STA. 11+75

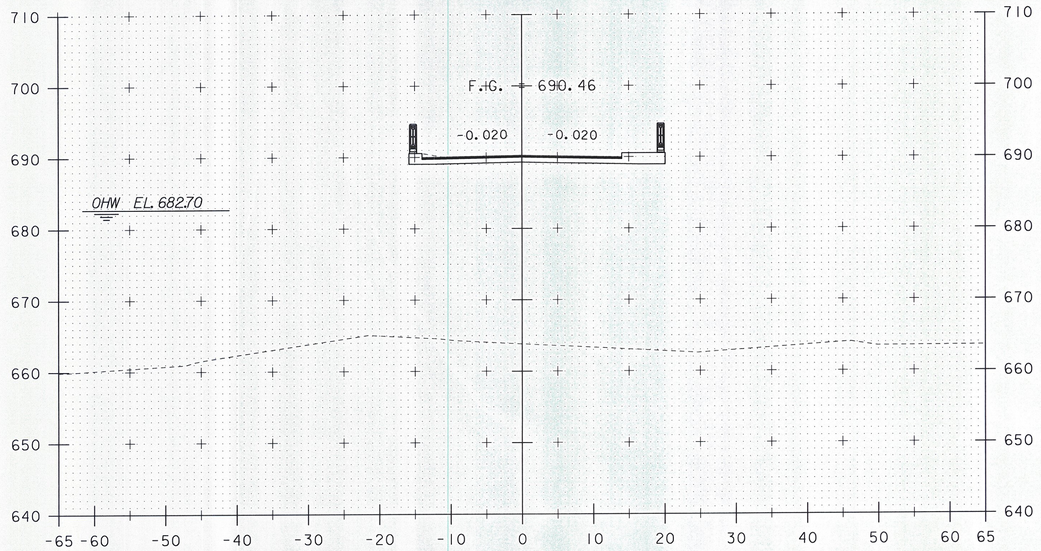
PROJECT NAME: NEWPORT CITY
PROJECT NUMBER: BRO 1449(25)

FILE NAME: 96J314/STR/96J314xsl.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
MAINLINE SECTION 1

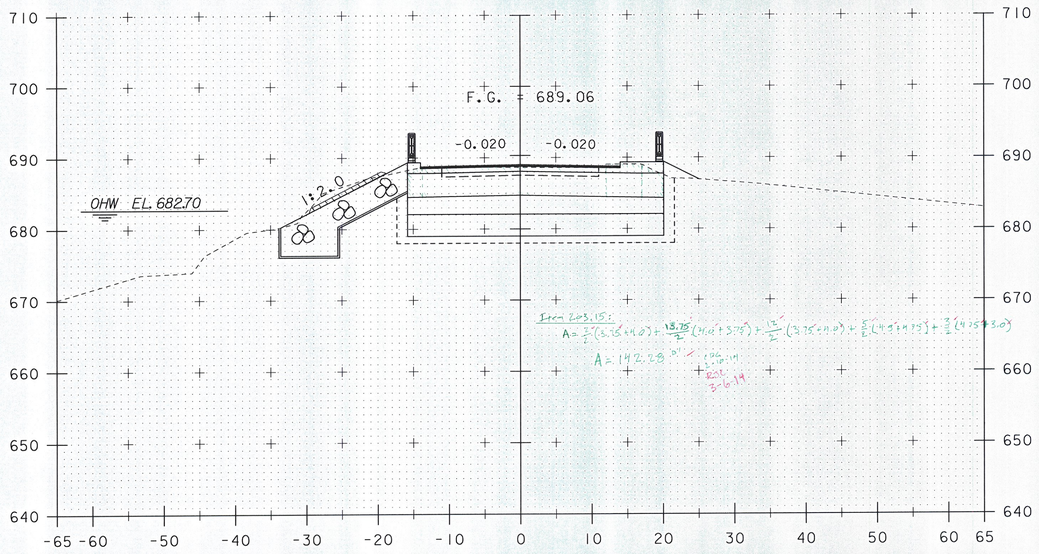
PLOT DATE: 02-DEC-2011
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 49 OF 75



12+00

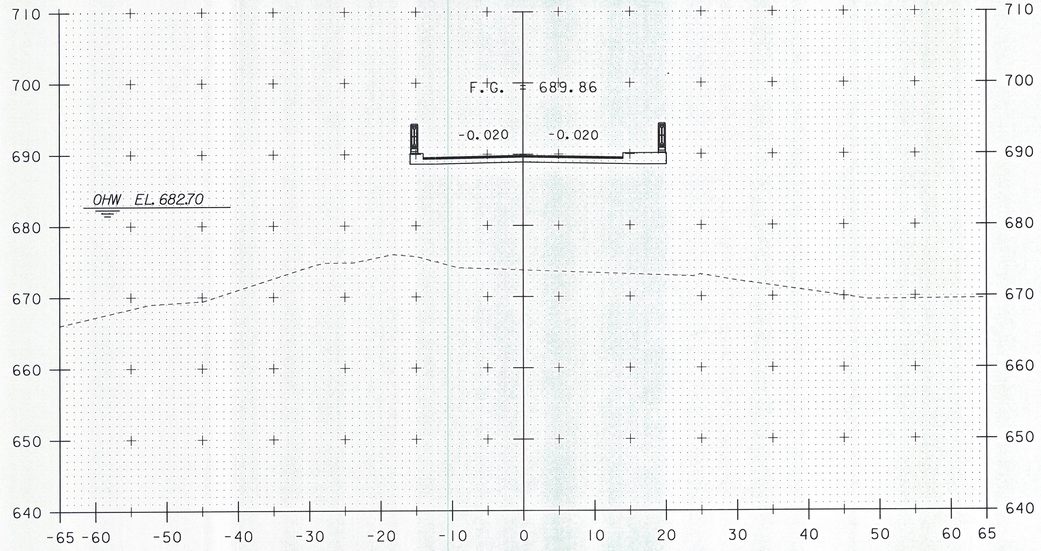


12+50



STA. 11+97.17
BEGIN BRIDGE

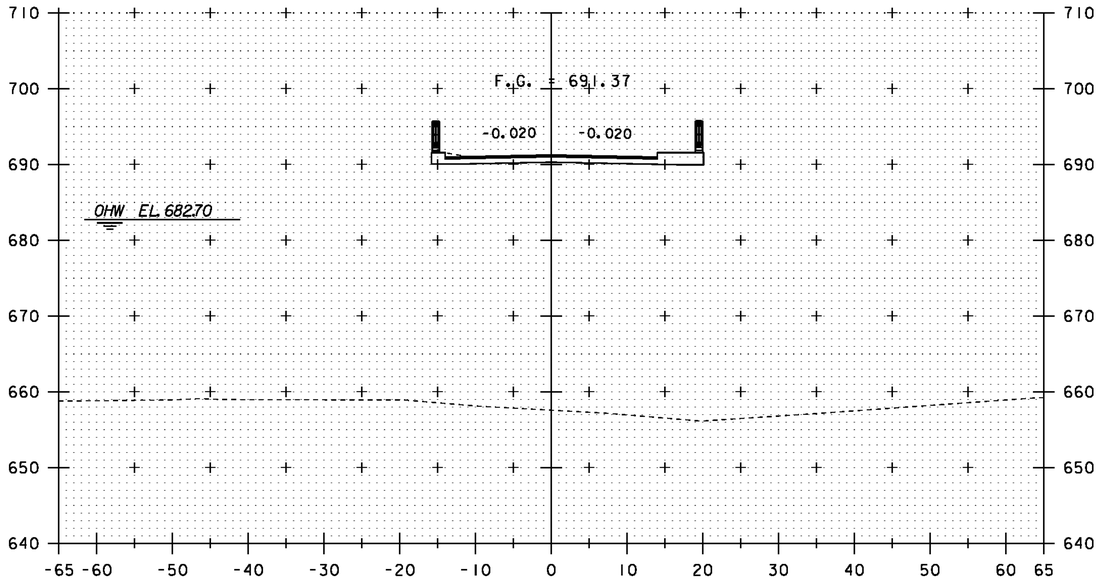
11+96 (Same for 11+96.5 - Butt)
- Item 203.15



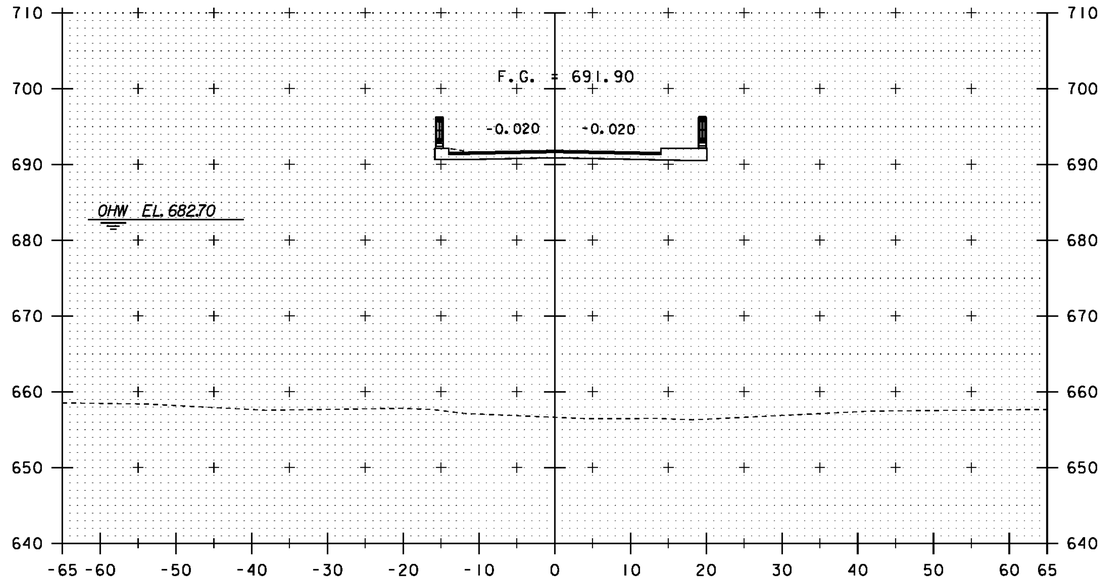
12+25

STA. 11+96 TO STA. 12+50

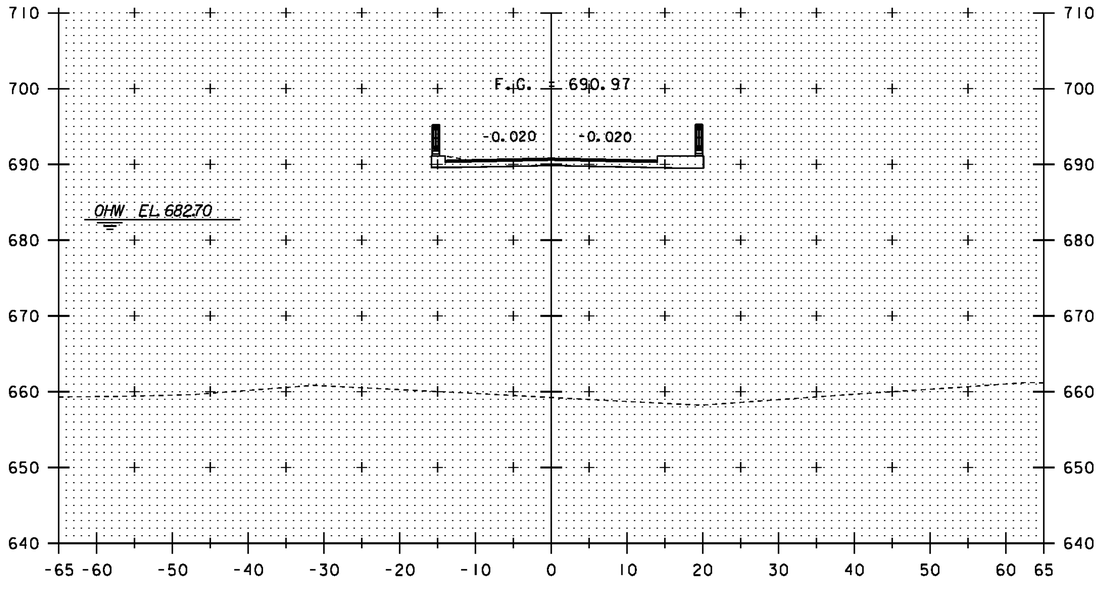
PROJECT NAME:	NEWPORT CITY
PROJECT NUMBER:	BRO 1449(25)
FILE NAME: 96J314/STR/96J314xsl.dgn	PLOT DATE: 22-NOV-2011
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: D. PETERSON	CHECKED BY: C. CARLSON
MAINLINE SECTION 2	SHEET 50 OF 75



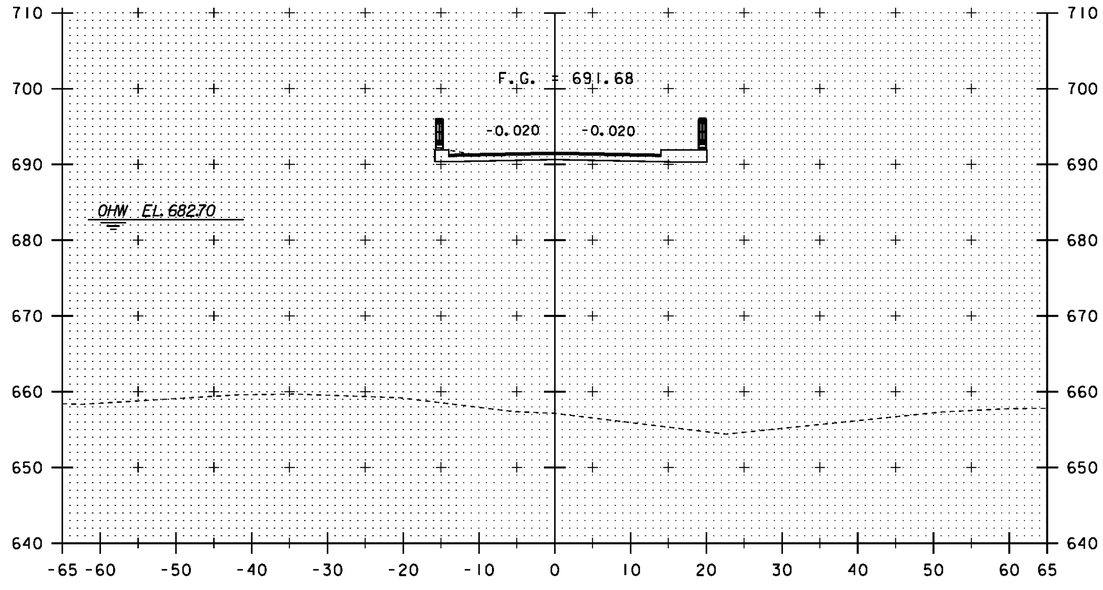
13+00



13+50



12+75



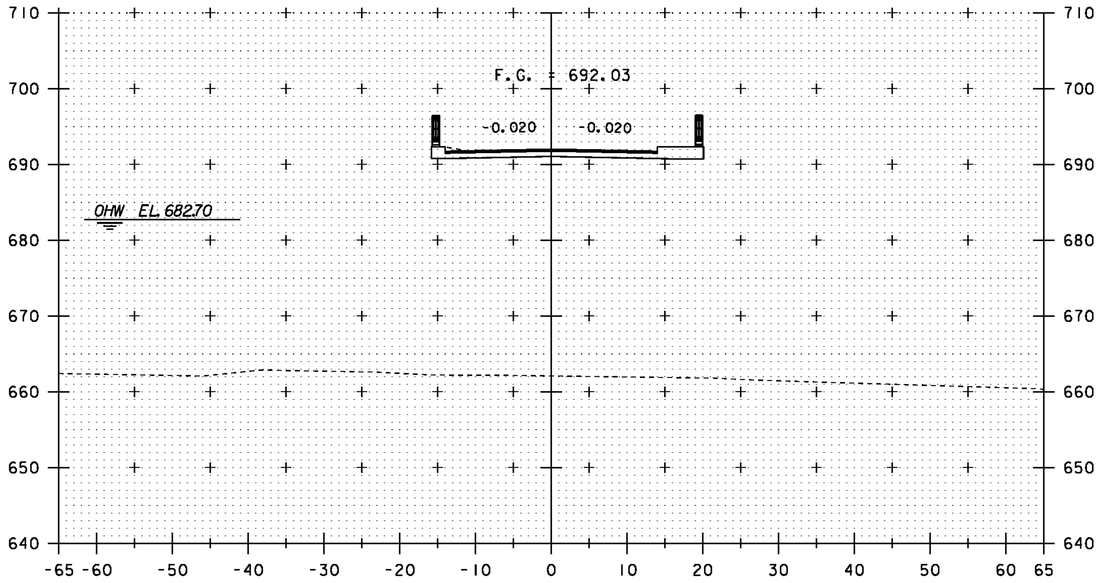
13+25

STA. 12+75 TO STA. 13+50

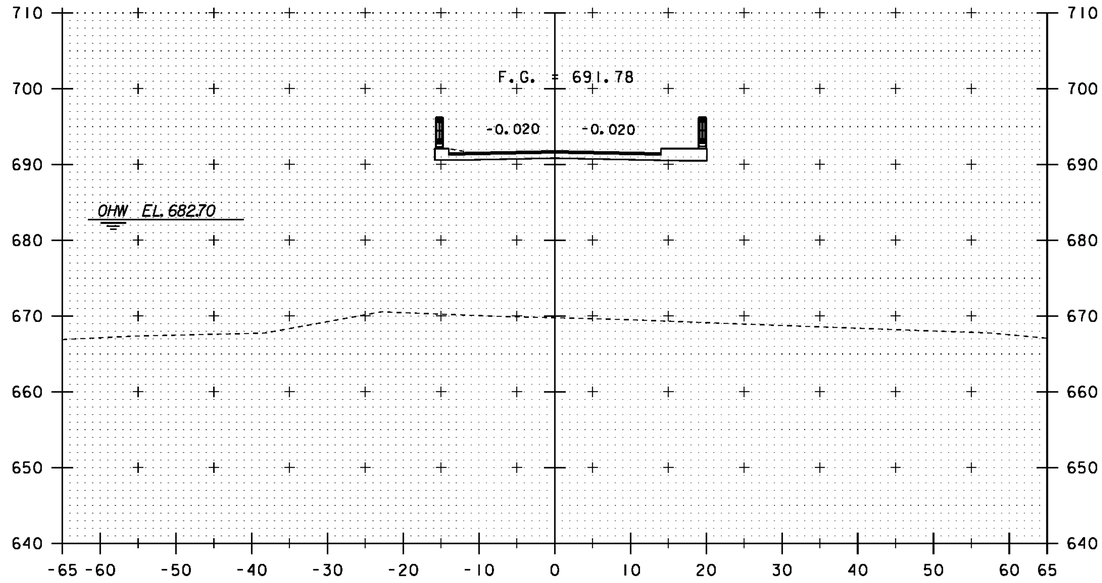
PROJECT NAME: NEWPORT CITY
PROJECT NUMBER: BRO 1449(25)

FILE NAME: 96J314/STR/96J314xsl.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
MAINLINE SECTION 3

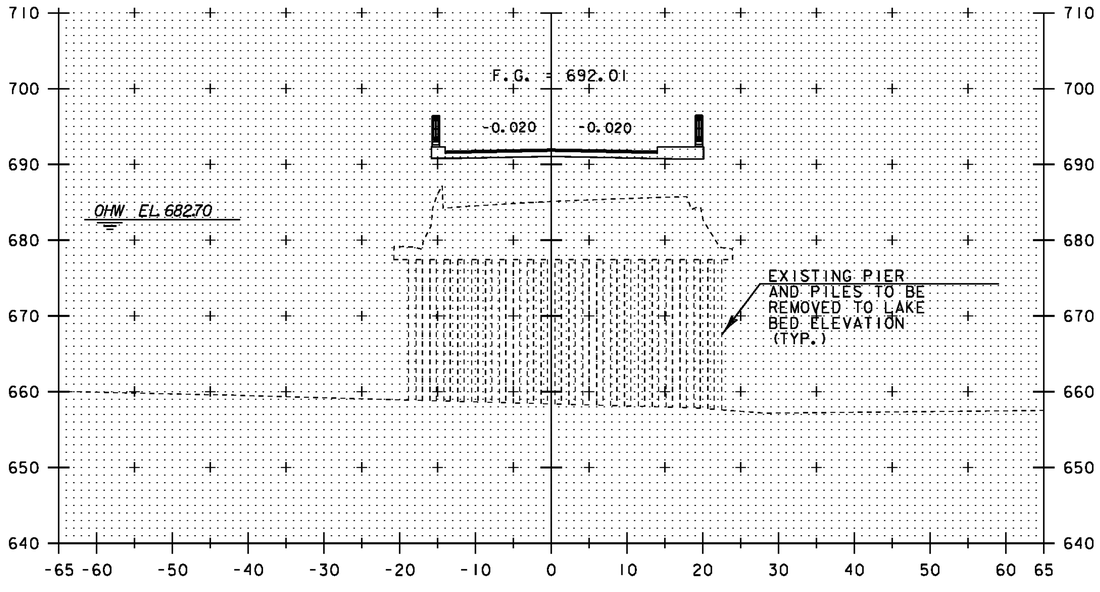
PLOT DATE: 22-NOV-2011
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 51 OF 75



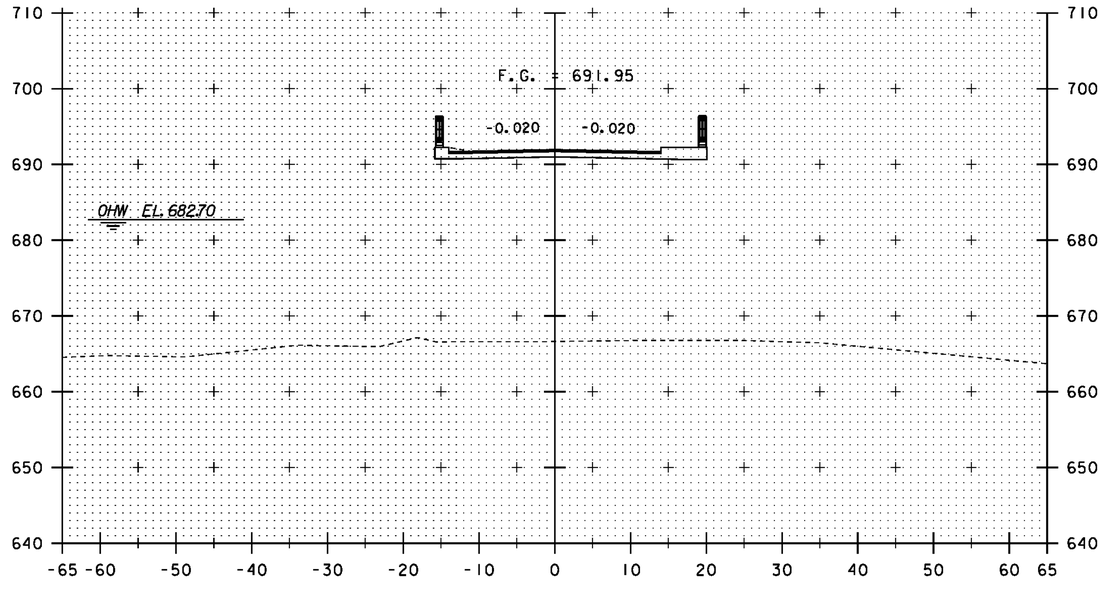
14+00



14+50



13+75



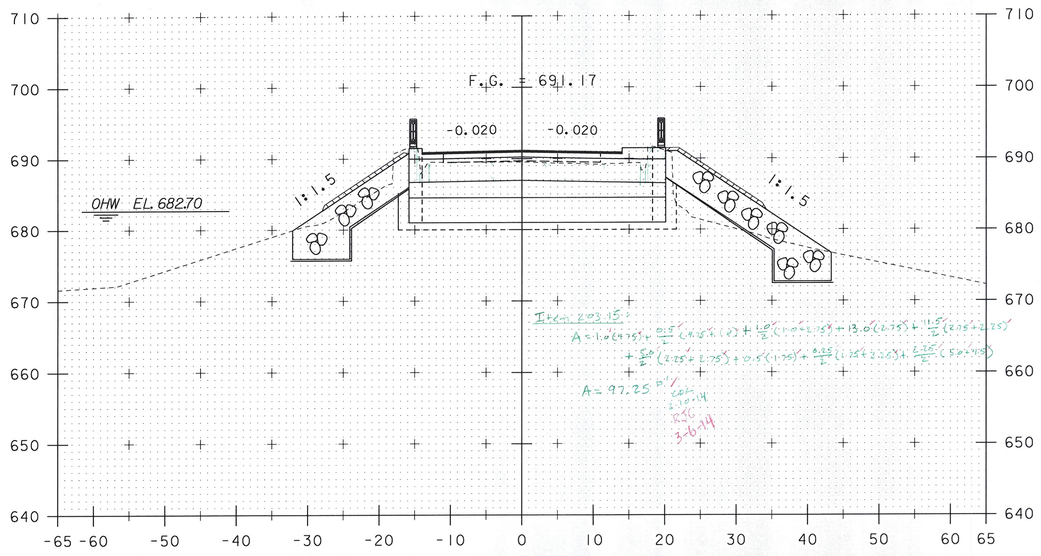
14+25

STA. 13+75 TO STA. 14+50

PROJECT NAME: NEWPORT CITY
PROJECT NUMBER: BRO 1449(25)

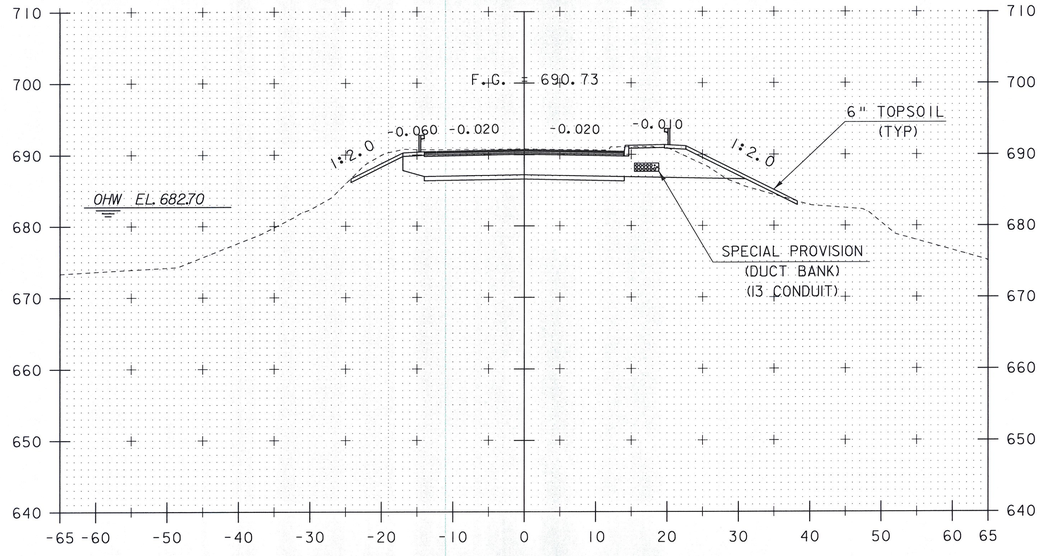
FILE NAME: 96J314/STR/96J314xsl.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
MAINLINE SECTION 4

PLOT DATE: 22-NOV-2011
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 52 OF 75

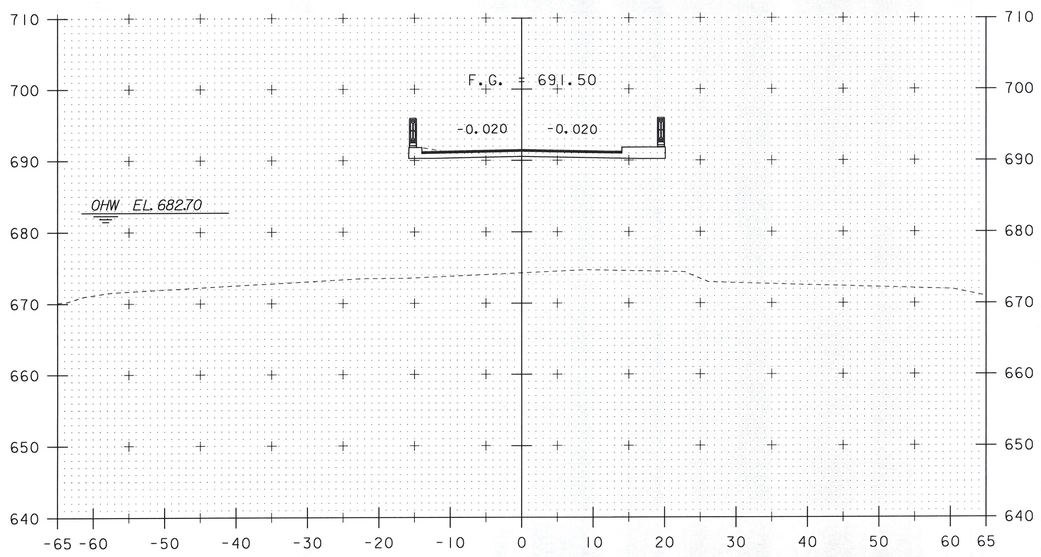


STA. 14+96.83
END BRIDGE

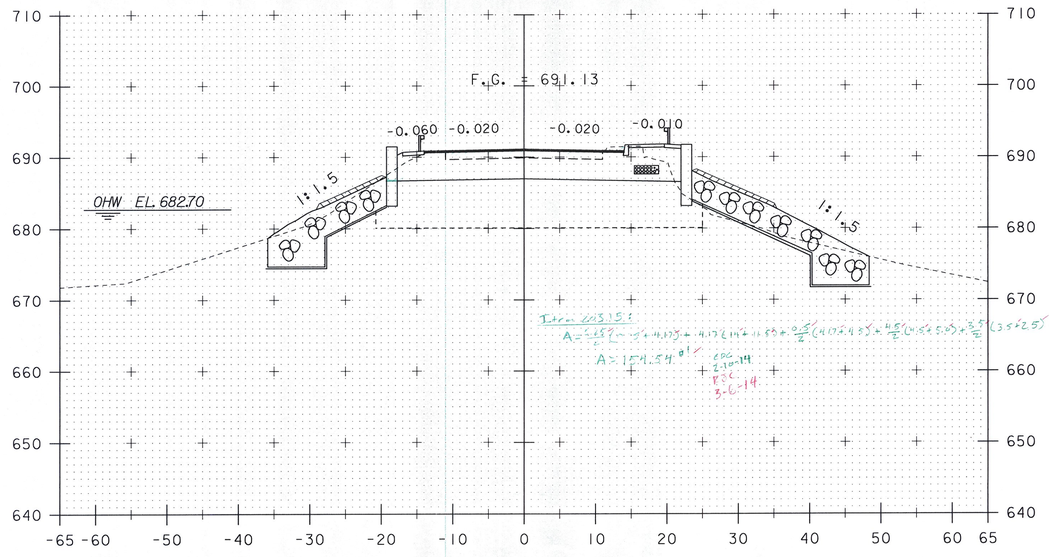
14+98 = 14+97.5 (Item 203.15)
-Bust



15+25



14+75

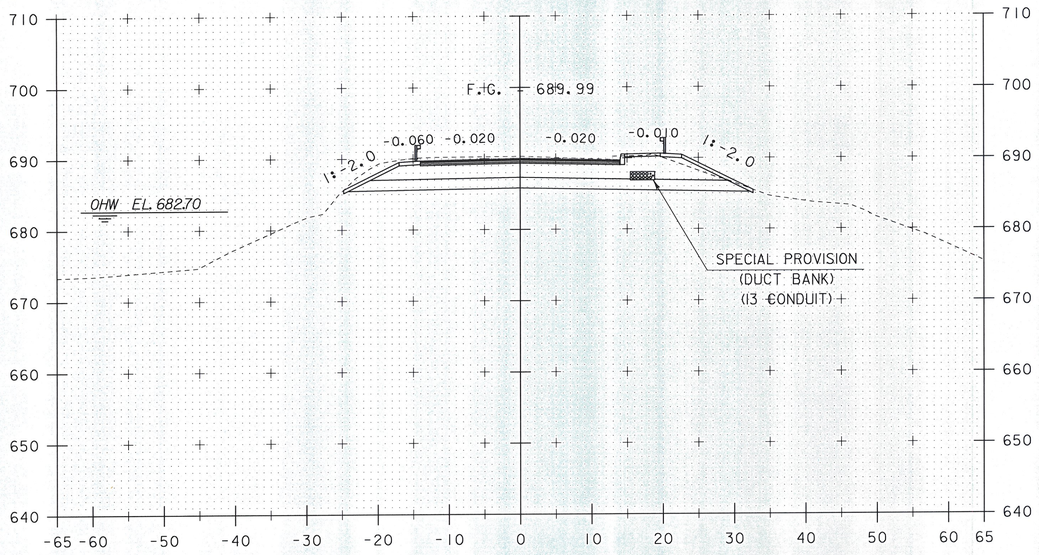


15+00

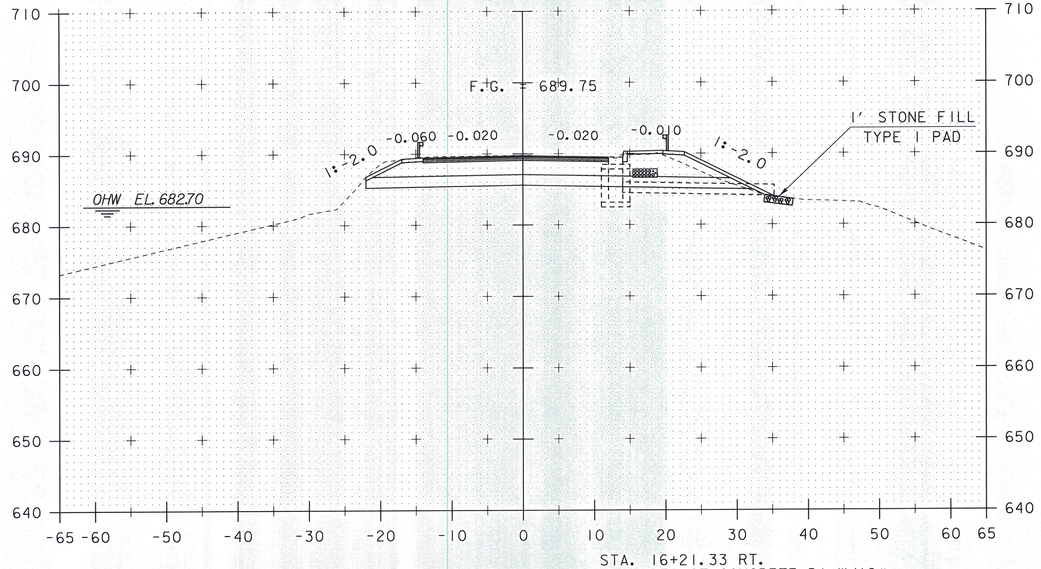
STA. 14+75 TO STA. 15+25

PROJECT NAME:	NEWPORT CITY
PROJECT NUMBER:	BRO 1449(25)

FILE NAME: 96J314/STR/96J314xsl.dgn	PLOT DATE: 02-DEC-2011
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: D. PETERSON	CHECKED BY: C. CARLSON
MAINLINE SECTION 5	SHEET 53 OF 75

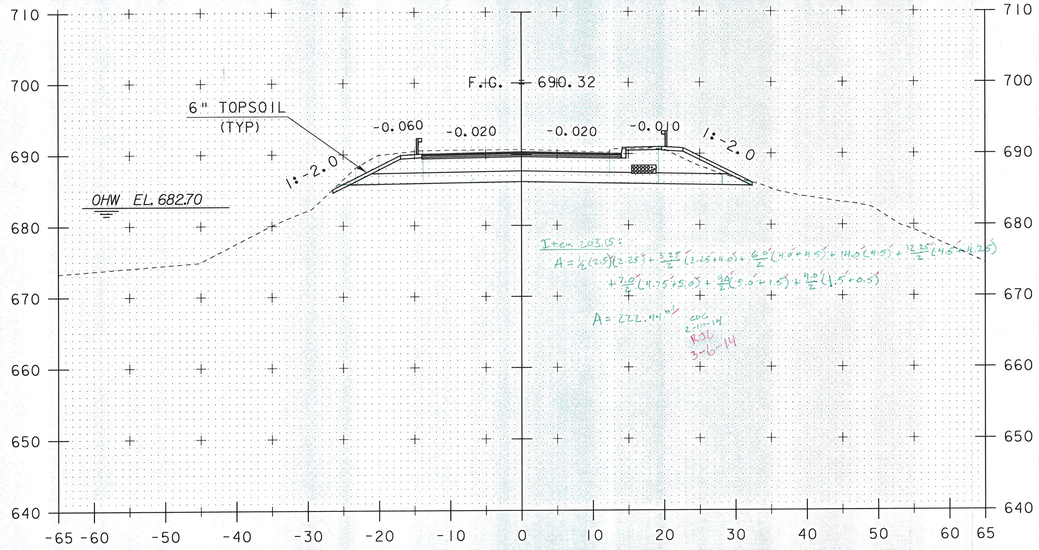


15+75

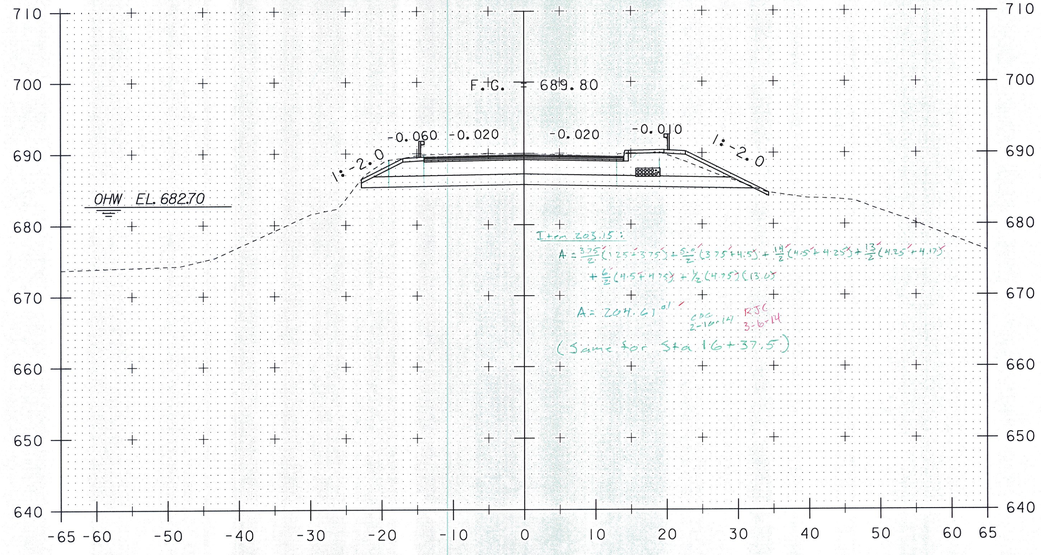


STA. 16+21.33 RT.
PRECAST CONCRETE DI W/18"
OPTION PIPE AND STONE FILL
TYPE I PAD

16+25



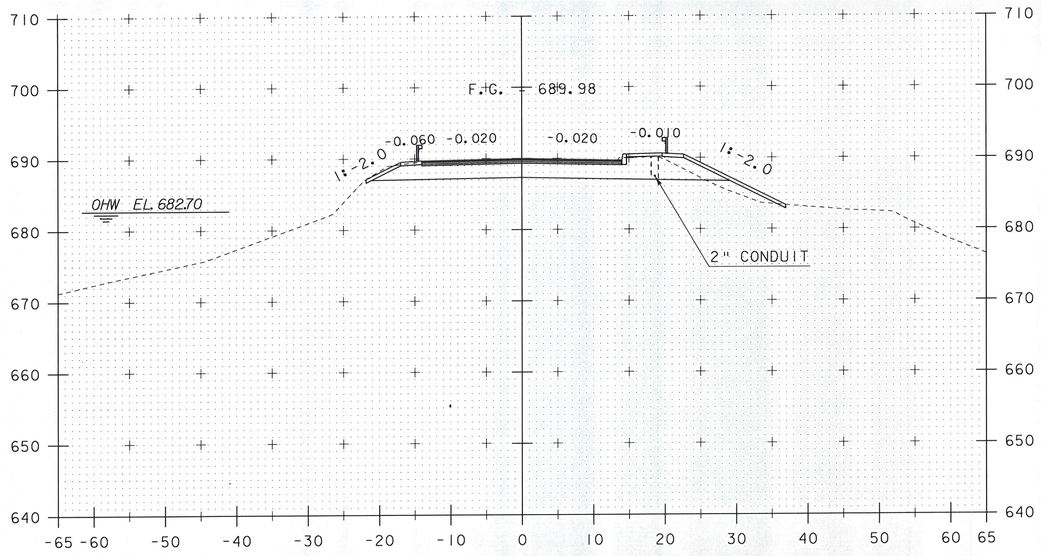
15+50



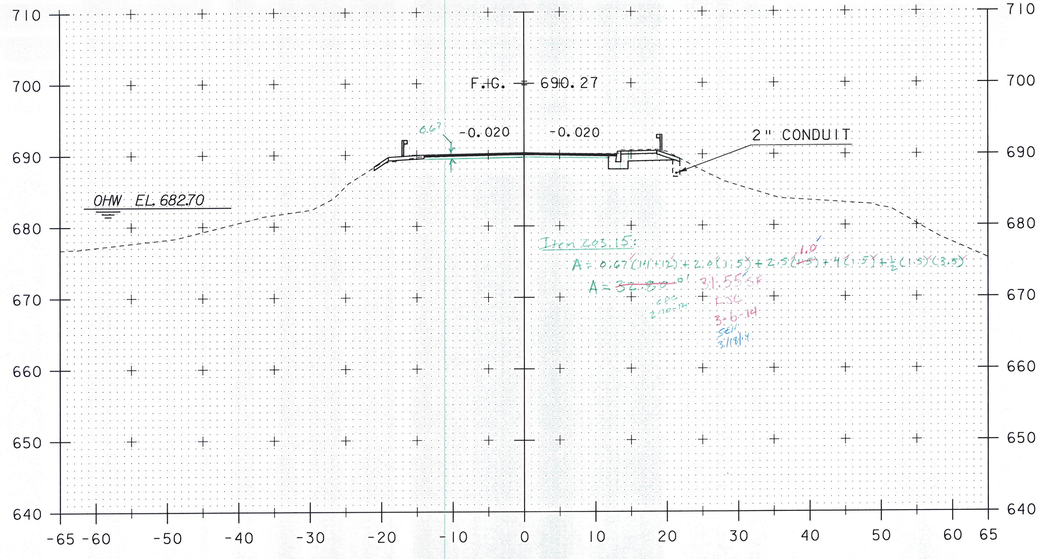
16+00

STA. 15+50 TO STA. 16+25

PROJECT NAME:	NEWPORT CITY
PROJECT NUMBER:	BRO 1449(25)
FILE NAME: 96314/STR/96314xsl.dgn	PLOT DATE: 02-DEC-2011
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: D. PETERSON	CHECKED BY: C. CARLSON
MAINLINE SECTION 6	SHEET 54 OF 75

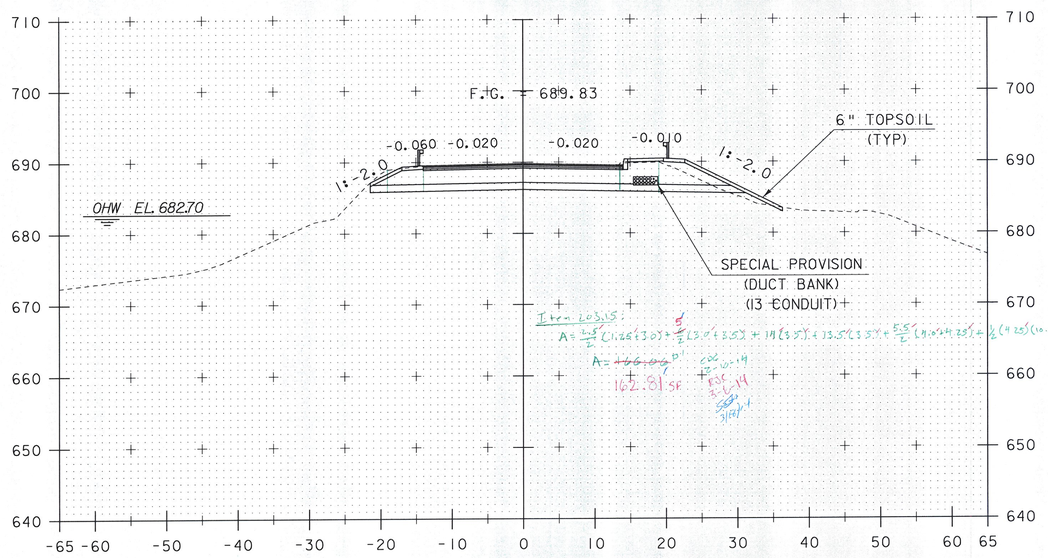


16+75



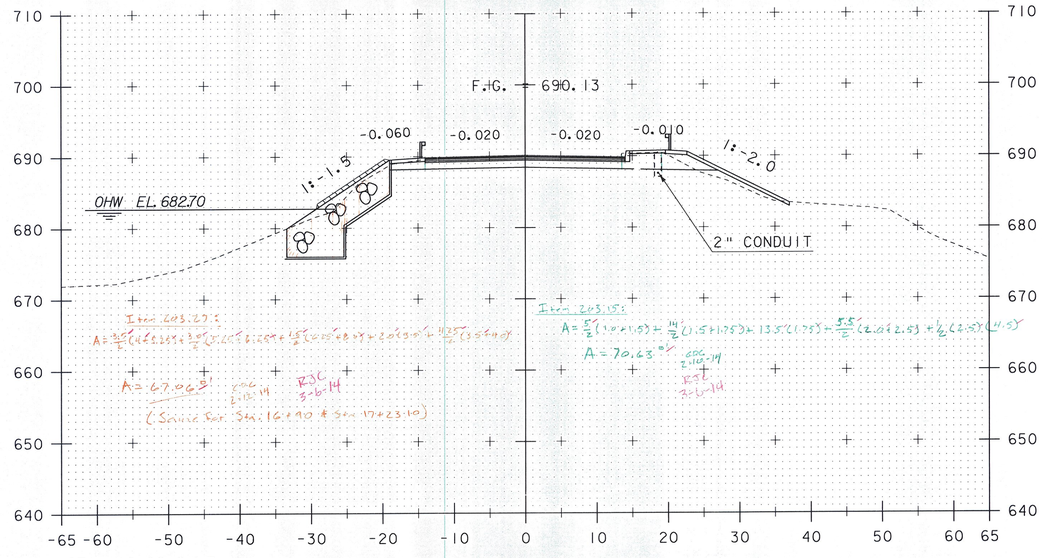
STA. 17+23.10 LT.
END STONE FILL, TYPE IV
UNCLASSIFIED CHANNEL EXCAVATION
GEOTEXTILE UNDER STONE FILL
GRUBBING MATERIAL

17+25



16+50

STA. 16+37.50
END PROJECT
BEGIN APPROACH



STA. 16+90.0 LT.
BEGIN STONEFILL, TYPE IV
UNCLASSIFIED CHANNEL EXCAVATION
GEOTEXTILE UNDER STONEFILL
GRUBBING MATERIAL

17+00

Item 203.27, Unclassified Channel Excavation

Sta	Dist.	Area	Vol.
16+100		67.06	
	3310		2219.69 / 27 = 82.2 CY
17+23.10		67.06	

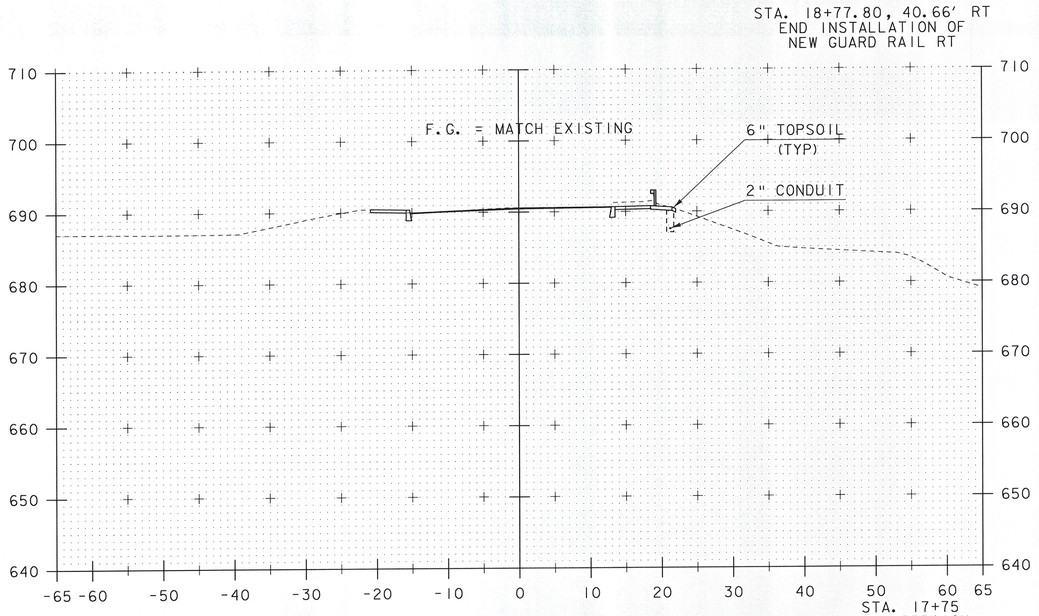
2-12-14 RJC 3-6-14

STA. 16+50 TO STA. 17+25

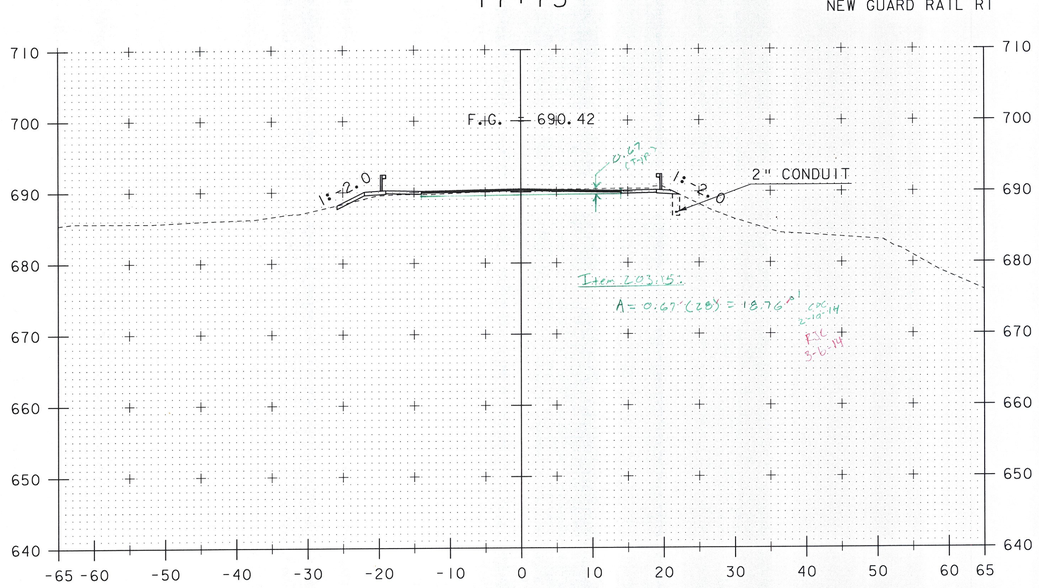
PROJECT NAME: NEWPORT CITY
PROJECT NUMBER: BRO 1449(25)

FILE NAME: 96J314/STR/96J314xsl.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
MAINLINE SECTION 7

PLOT DATE: 02-DEC-2011
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 55 OF 75



17+75



17+50 = 17+58.5 (End Item 203.15) − Butt

(Extended Limits - See Material Transition Diagram)

Item 203.15, Common Excavation

	Station	Dist	Area	Volume
(Butt)	11+00		20.77	2525.5 ~~2563.0~~
		50	80.25 ~~81.75~~	
	11+50			5173.8 ~~5208.7~~
		465	1412.28	
(Butt)	11+96.5			

Ex. Inlet

(Butt)	14+97.5		97.25	314.7
		215	154.54	
	15+00			9424.5
		50	222.44	
	15+50			10676.3
		50	204.61	
	16+00			7672.9
		375	204.61	7296.4 ~~7316.7~~
	16+37.5			
		12.5	162.81 ~~166.06~~	5836.0 ~~5917.3~~
	16+50			
		50	70.63	1277.3 ~~1292.9~~
	17+00			
		25	31.55 ~~31.84~~	628.9 ~~644.5~~
	17+25			
		25	18.76	154.5
	17+50			
		8.5	18.76	
(Butt)	17+58.5			

Total 45925.8 ~~46141.0~~ / 27 = 1703.2 ~~1710.8~~ CY

CDC 2-19-14

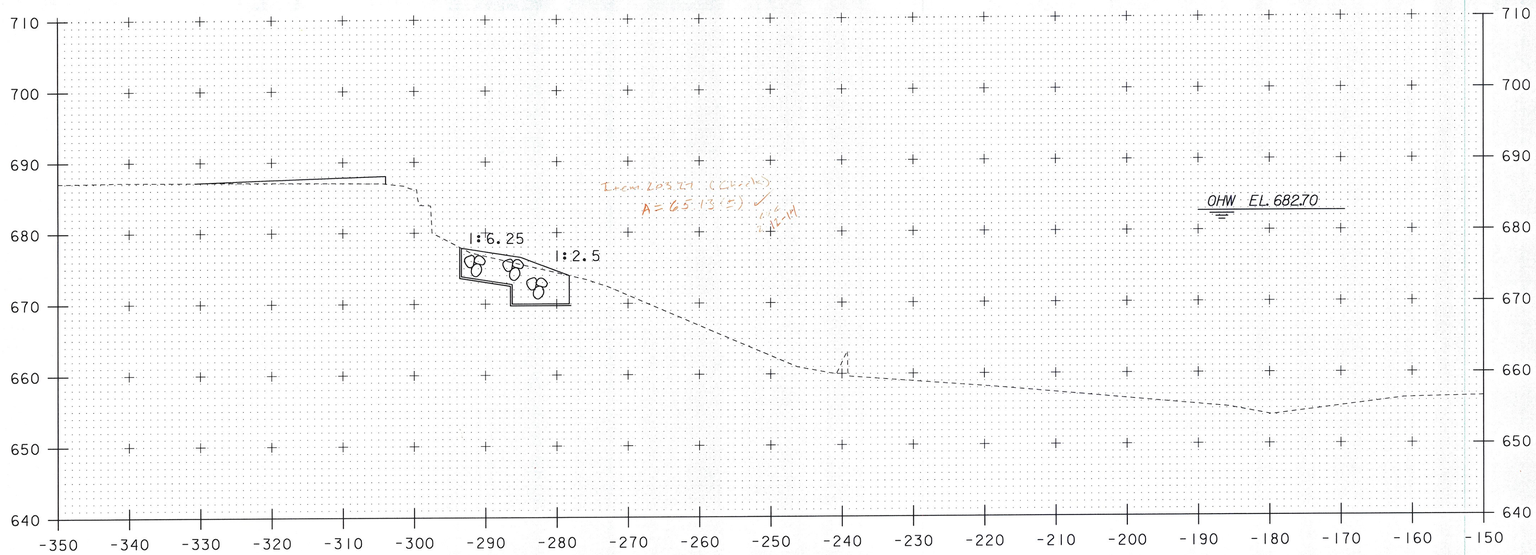
RJC 3-6-14

SEH 3/18/14

STA. 17+50 TO STA. 17+75

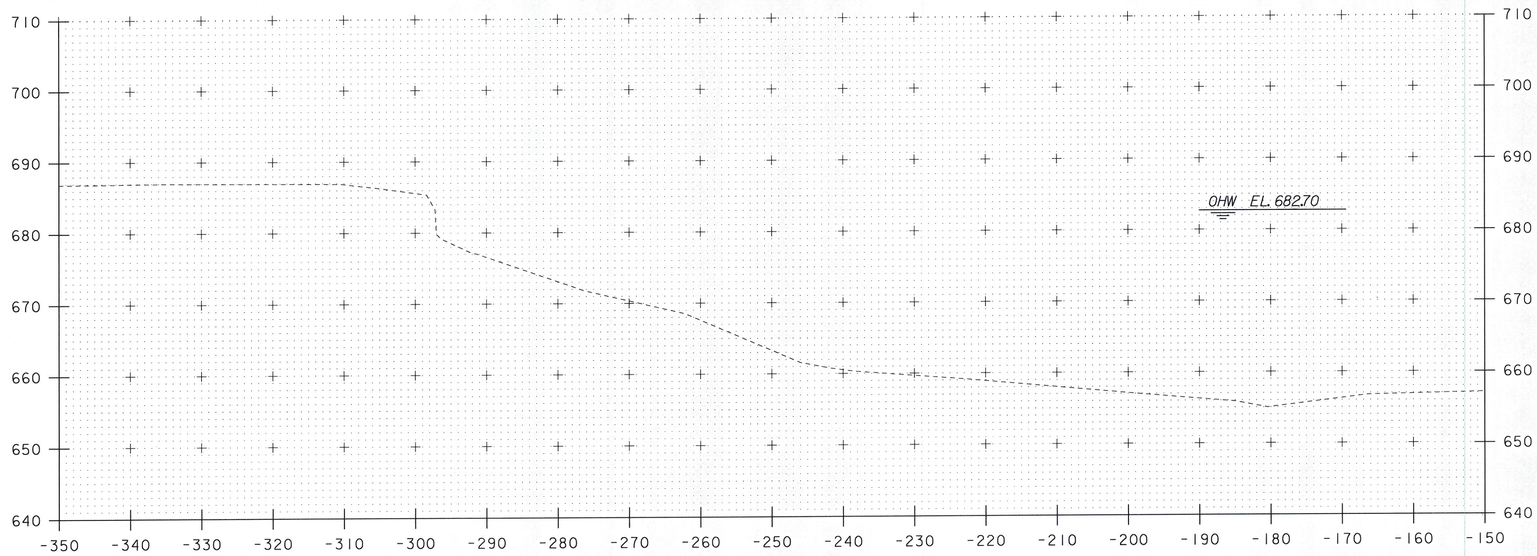
PROJECT NAME:	NEWPORT CITY
PROJECT NUMBER:	BRO 1449(25)
FILE NAME: 96314/STR/96314xsl.dgn	PLOT DATE: 22-NOV-2011
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: D. PETERSON	CHECKED BY: C. CARLSON
MAINLINE SECTION 8	SHEET 56 OF 75

STA. 50+53.40 LT
BEGIN GRANULAR BACKFILL
FOR STRUCTURES



STA. 50+47.93 LT
BEGIN UNCLASSIFIED CHANNEL EXCAVATION
GEOTEXTILE UNDER STONE FILL
STONE FILL, TYPE IV
GRUBBING MATERIAL

50+50



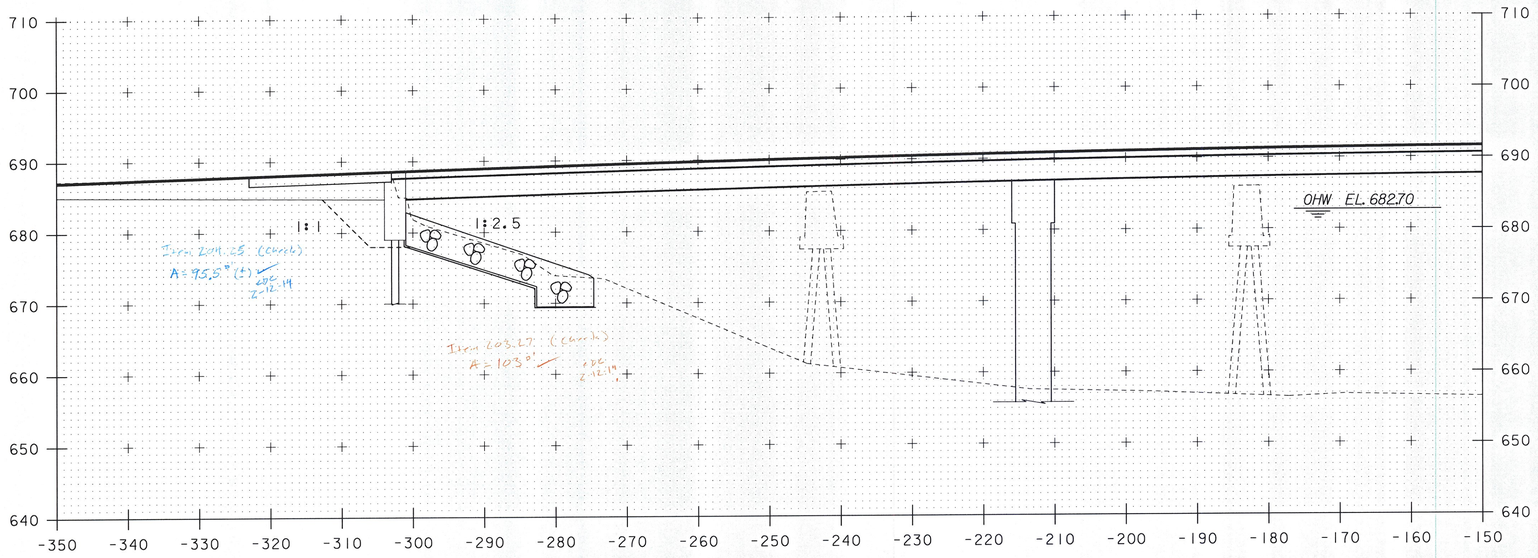
50+40

CHANNEL LT. STA. 50+40 TO STA. 50+50

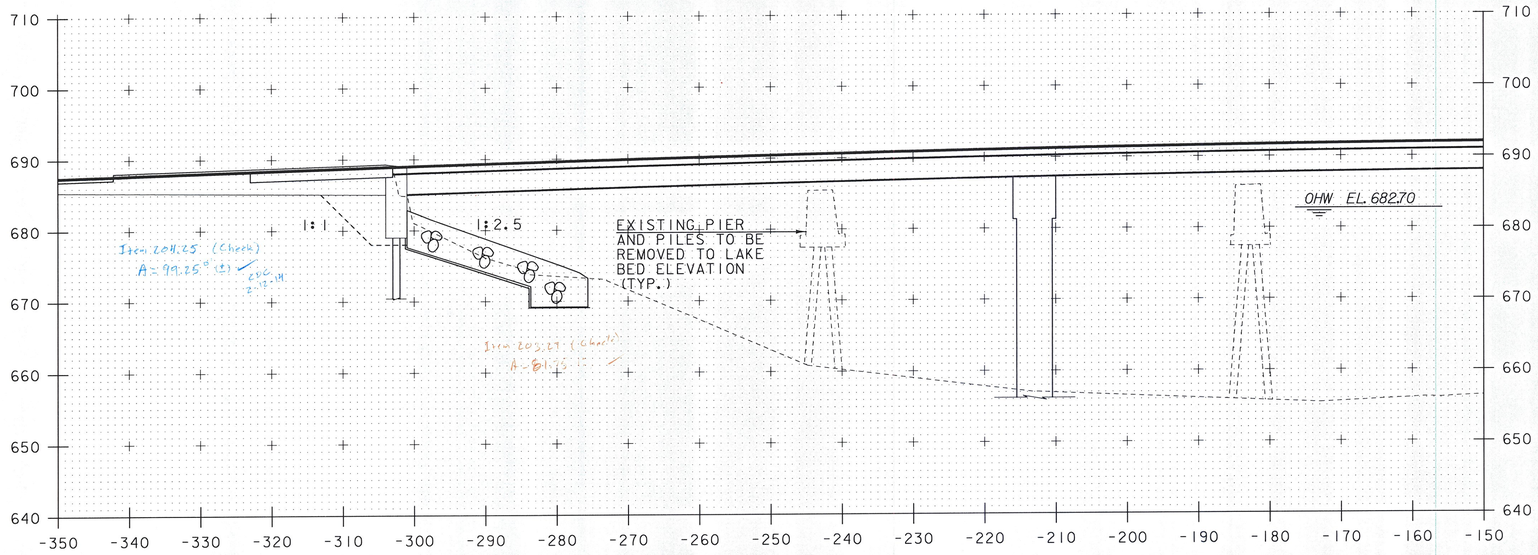
PROJECT NAME: NEWPORT CITY
PROJECT NUMBER: BRO 1449(25)

FILE NAME: 96J314/STR/96J314xsl.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
ABUTMENT 1 CHANNEL SECTION 1

PLOT DATE: 22-NOV-2011
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 57 OF 75



50+70



STA. 50+55 LT
END GRUBBING MATERIAL

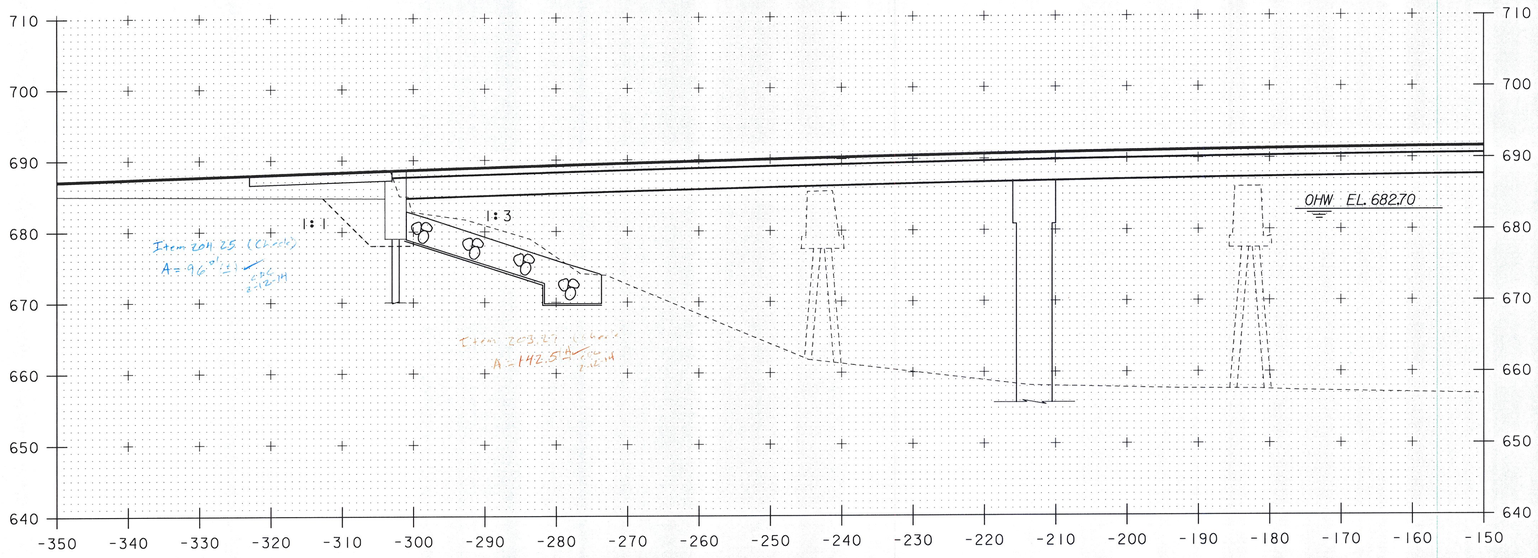
50+60

CHANNEL LT. STA. 50+60 TO STA. 50+70

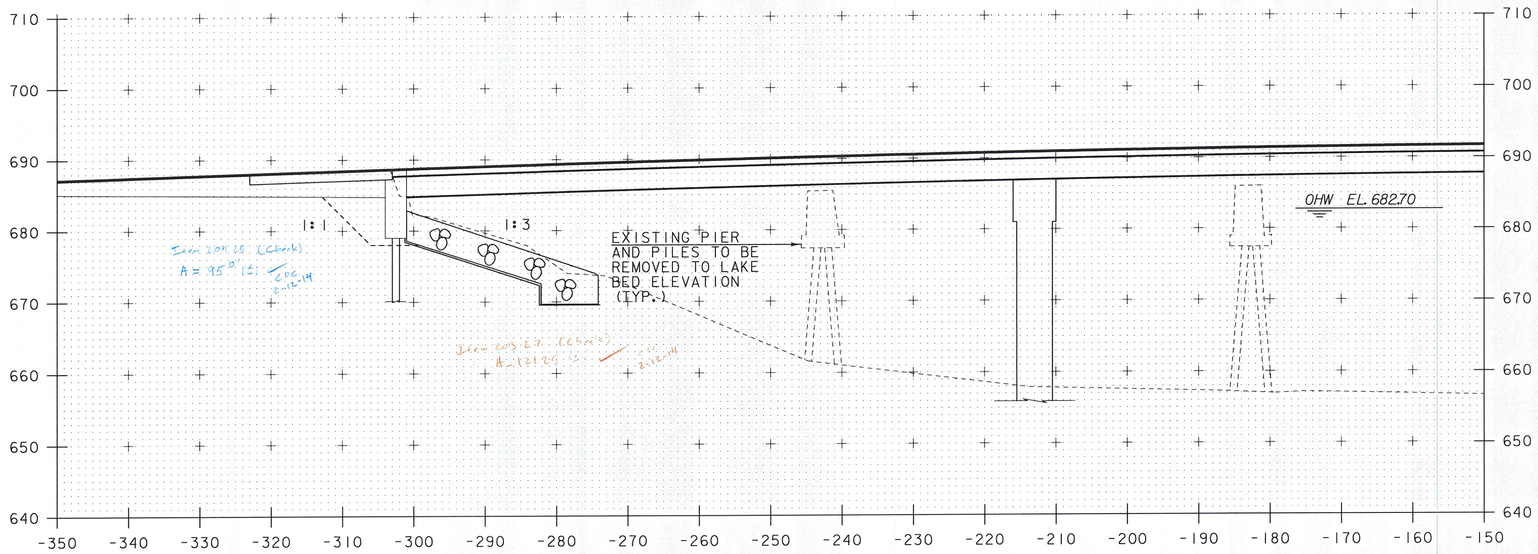
PROJECT NAME: NEWPORT CITY
PROJECT NUMBER: BRO 1449(25)

FILE NAME: 96J314/STR/96J314xsl.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
ABUTMENT 1 CHANNEL SECTION 2

PLOT DATE: 22-NOV-2011
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 58 OF 75



50+80



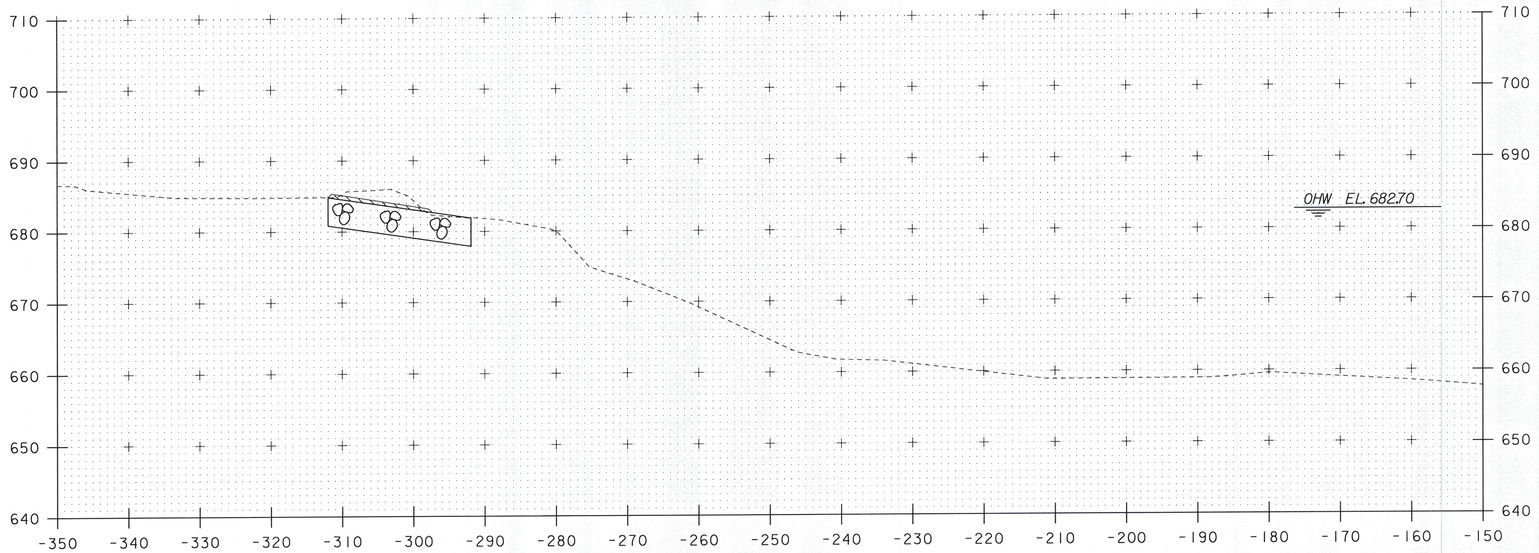
50+75

CHANNEL LT. STA. 50+75 TO STA. 50+80

PROJECT NAME:	NEWPORT CITY
PROJECT NUMBER:	BRO 1449(25)

FILE NAME: 96J314/STR/96J314xsl.dgn	PLOT DATE: 22-NOV-2011
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: D. PETERSON	CHECKED BY: C. CARLSON
ABUTMENT 1 CHANNEL SECTION 3	SHEET 59 OF 75

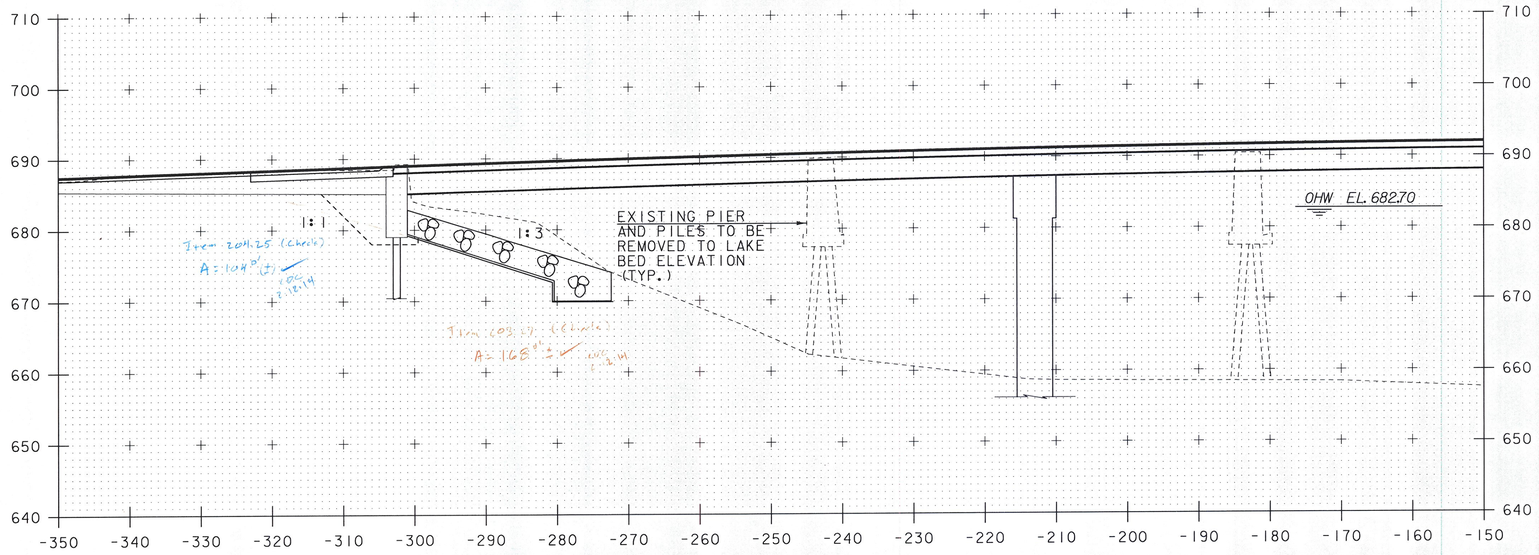
STA. 51+05 LT
END UNCLASSIFIED CHANNEL EXCAVATION
GEOTEXTILE UNDER STONE FILL
STONE FILL, TYPE IV
GRUBBING MATERIAL



STA. 50+91 LT
BEGIN GRUBBING MATERIAL

STA. 50+92 LT
END GRANULAR BACKFILL
FOR STRUCTURES

51+00



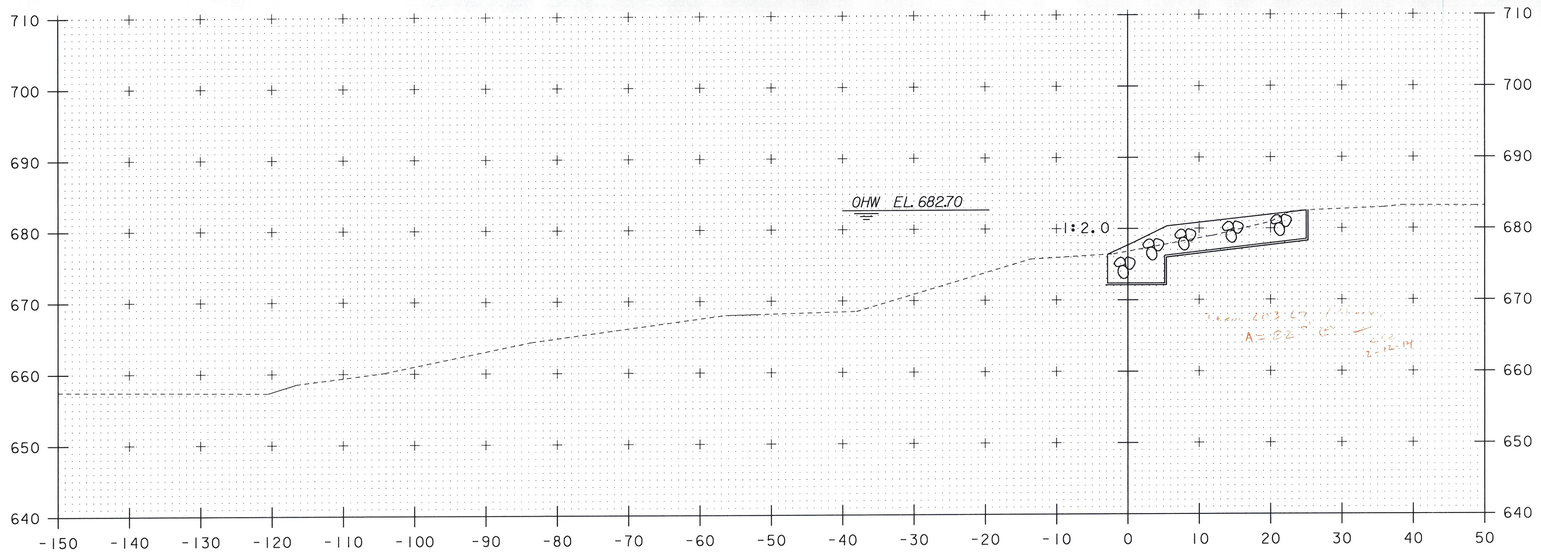
50+90

CHANNEL LT. STA. 50+90 TO STA. 51+00

PROJECT NAME: NEWPORT CITY
PROJECT NUMBER: BRO 1449(25)

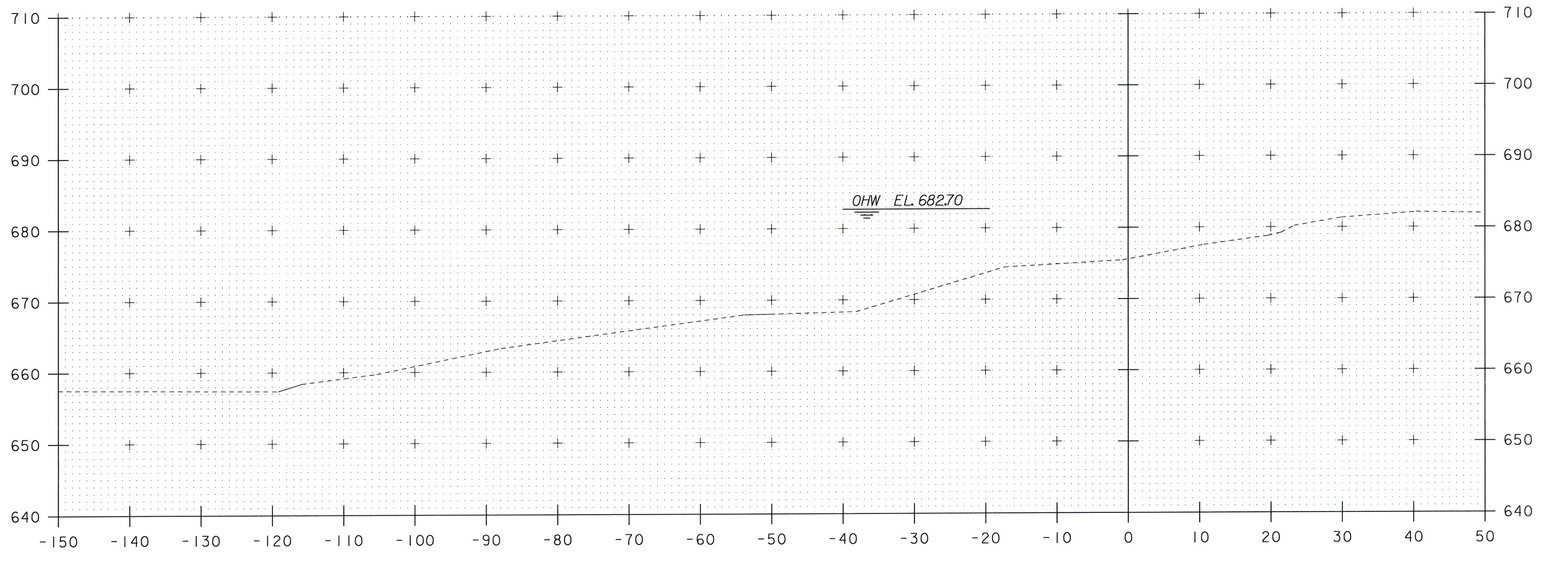
FILE NAME: 96J314/STR/96J314xsl.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
ABUTMENT 1CHANNEL SECTION 4

PLOT DATE: 22-NOV-2011
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 60 OF 75



50+30

STA. 50+29 RT
BEGIN UNCLASSIFIED CHANNEL EXCAVATION
GEOTEXTILE UNDER STONE FILL
STONE FILL, TYPE IV
GRUBBING MATERIAL



50+25

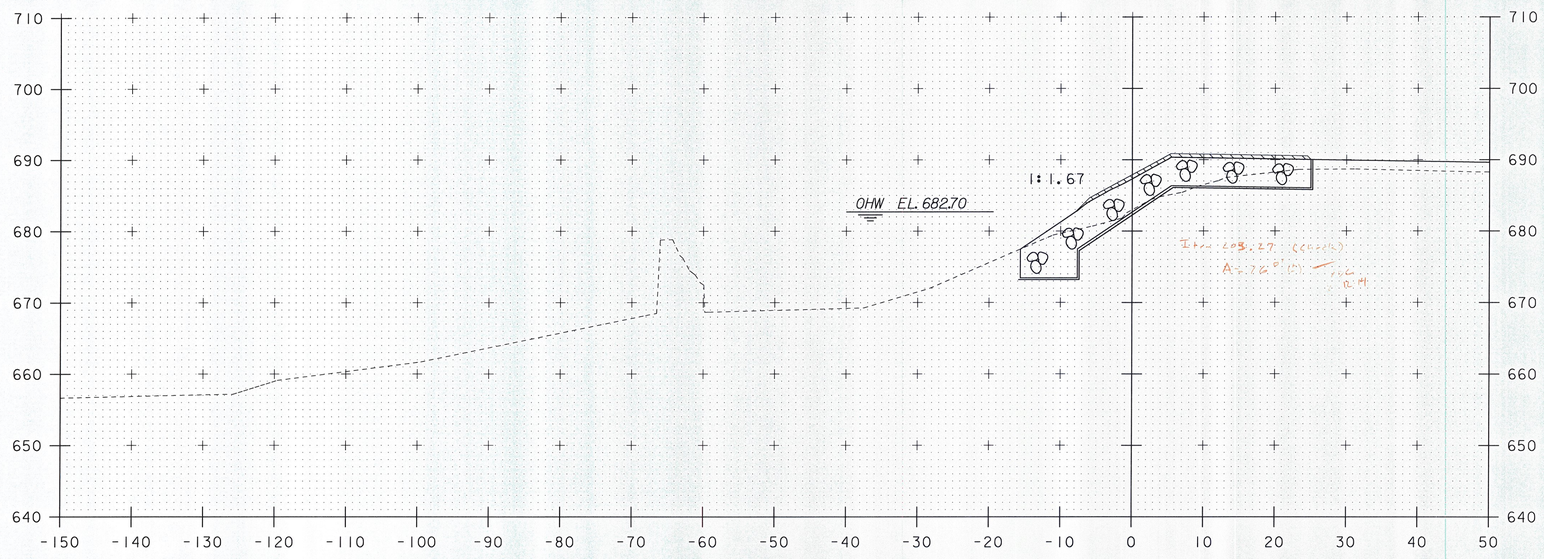
CHANNEL RT. STA. 50+25 TO STA. 50+30

PROJECT NAME: NEWPORT CITY
PROJECT NUMBER: BRO 1449(25)

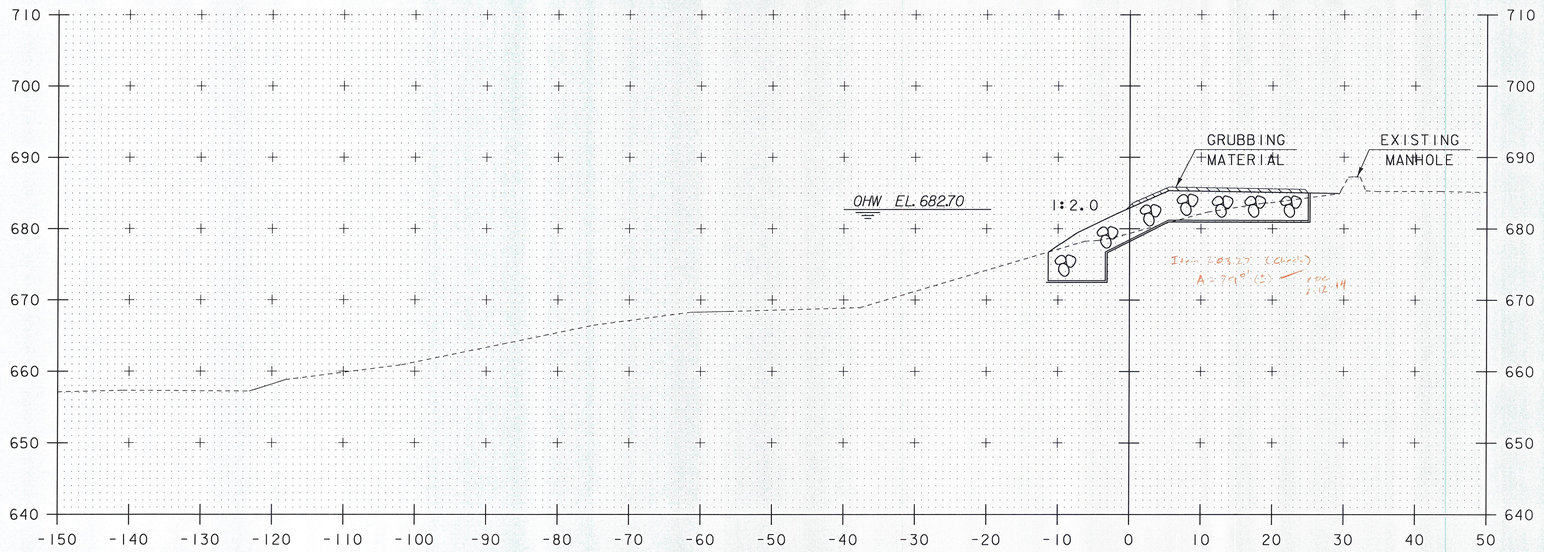
FILE NAME: 96J314/STR/96J314xsl.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
ABUTMENT 2 CHANNEL SECTION 1

PLOT DATE: 22-NOV-2011
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 61 OF 75

STA. 50+54.90 RT
END GRUBBING MATERIAL



50+50

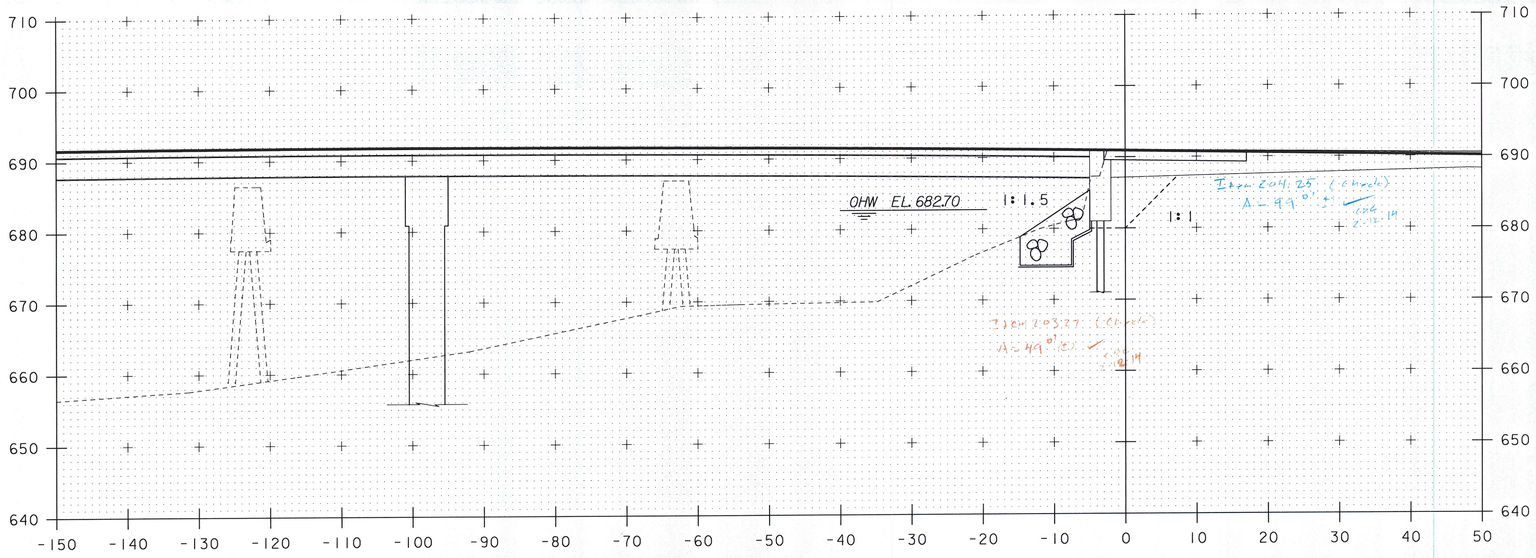


50+40

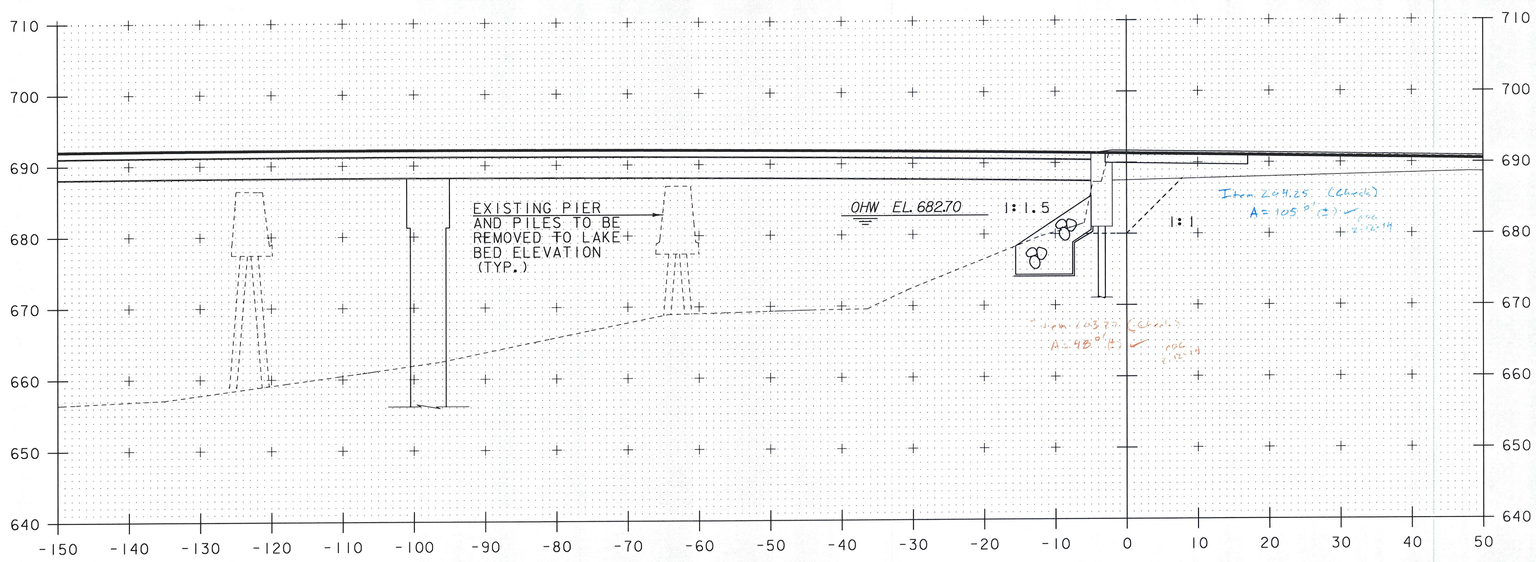
CHANNEL RT. STA. 50+40 TO STA. 50+50

PROJECT NAME:	NEWPORT CITY
PROJECT NUMBER:	BRO 1449(25)

FILE NAME: 96J314/STR/96J314xsl.dgn	PLOT DATE: 22-NOV-2011
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: D. PETERSON	CHECKED BY: C. CARLSON
ABUTMENT 2 CHANNEL SECTION 2	SHEET 62 OF 75



50+70

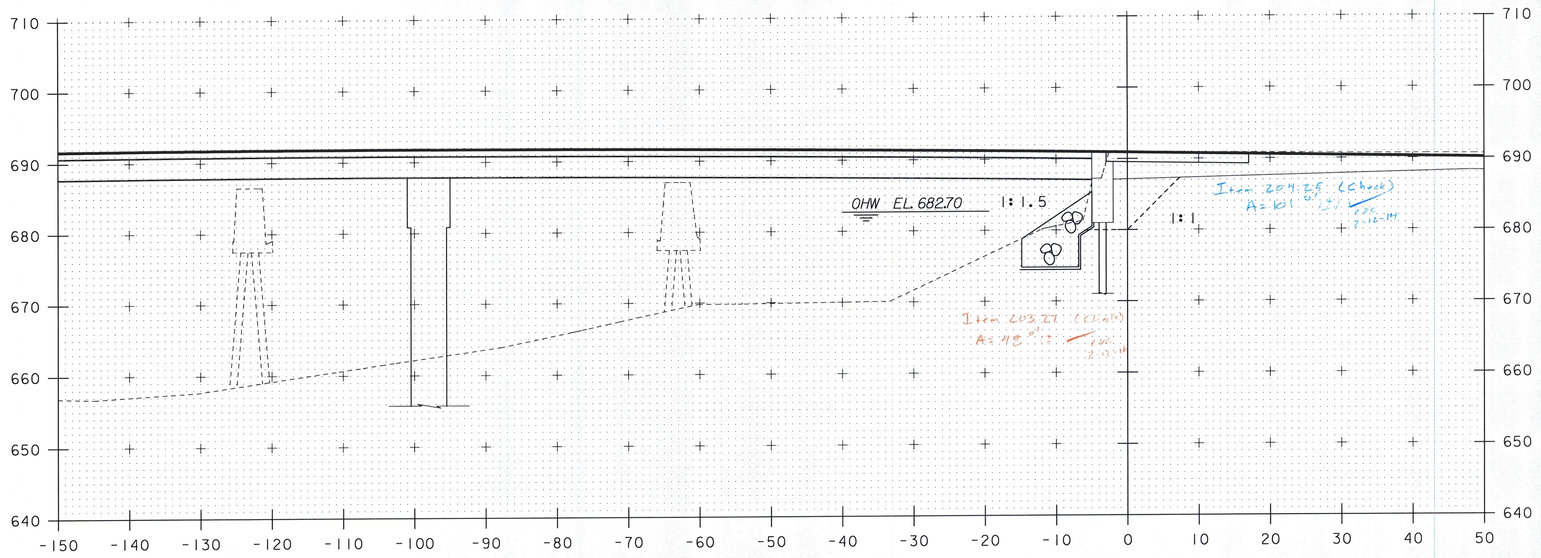


STA. 50+53.40 RT
BEGIN GRANULAR BACKFILL
FOR STRUCTURES

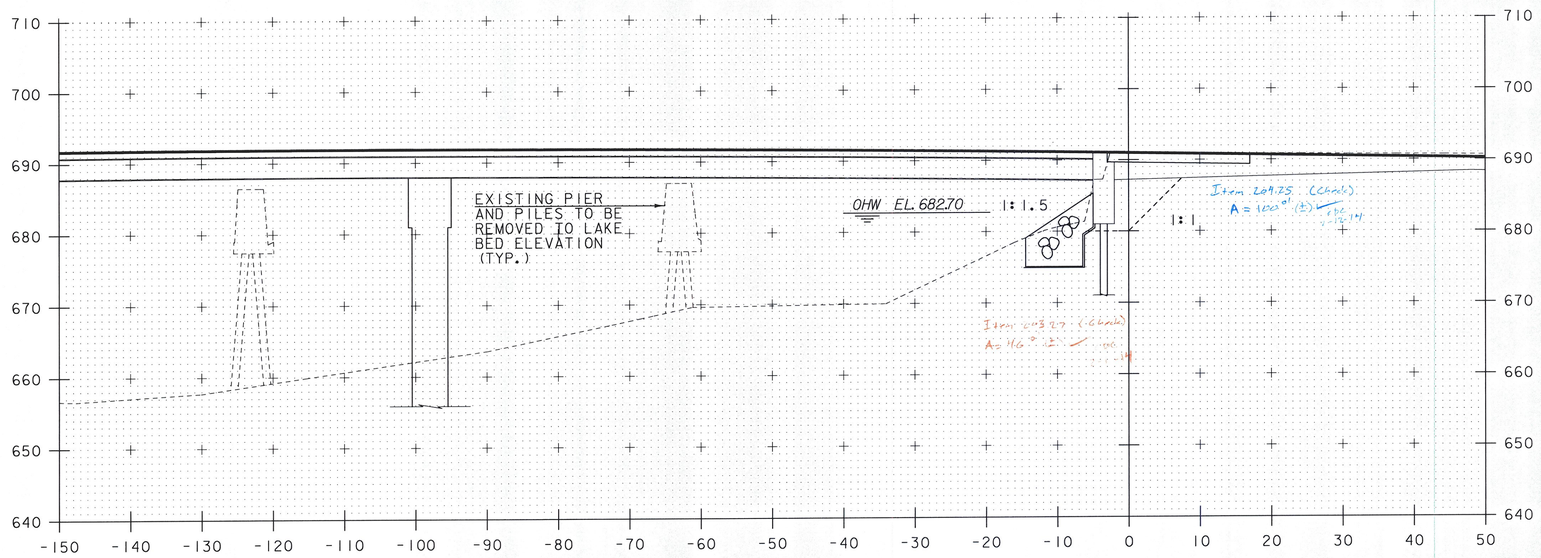
50+60

CHANNEL RT. STA. 50+60 TO STA. 50+70

PROJECT NAME:	NEWPORT CITY
PROJECT NUMBER:	BRO 1449(25)
FILE NAME: 96J314/STR/96J314xsl.dgn	PLOT DATE: 22-NOV-2011
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: D. PETERSON	CHECKED BY: C. CARLSON
ABUTMENT 2 CHANNEL SECTION 3	SHEET 63 OF 75



50+80



50+75

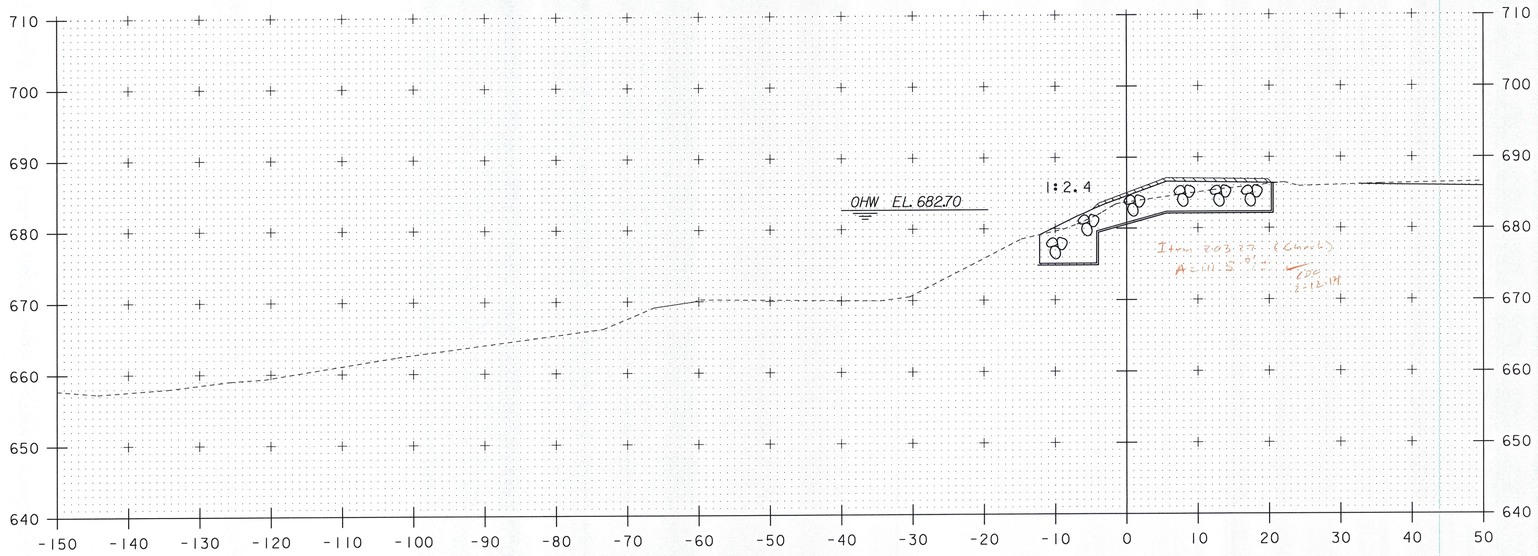
CHANNEL RT. STA. 50+75 TO STA. 50+80

PROJECT NAME: NEWPORT CITY
PROJECT NUMBER: BRO 1449(25)

FILE NAME: 96J314/STR/96J314xsl.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
ABUTMENT 2 CHANNEL SECTION 4

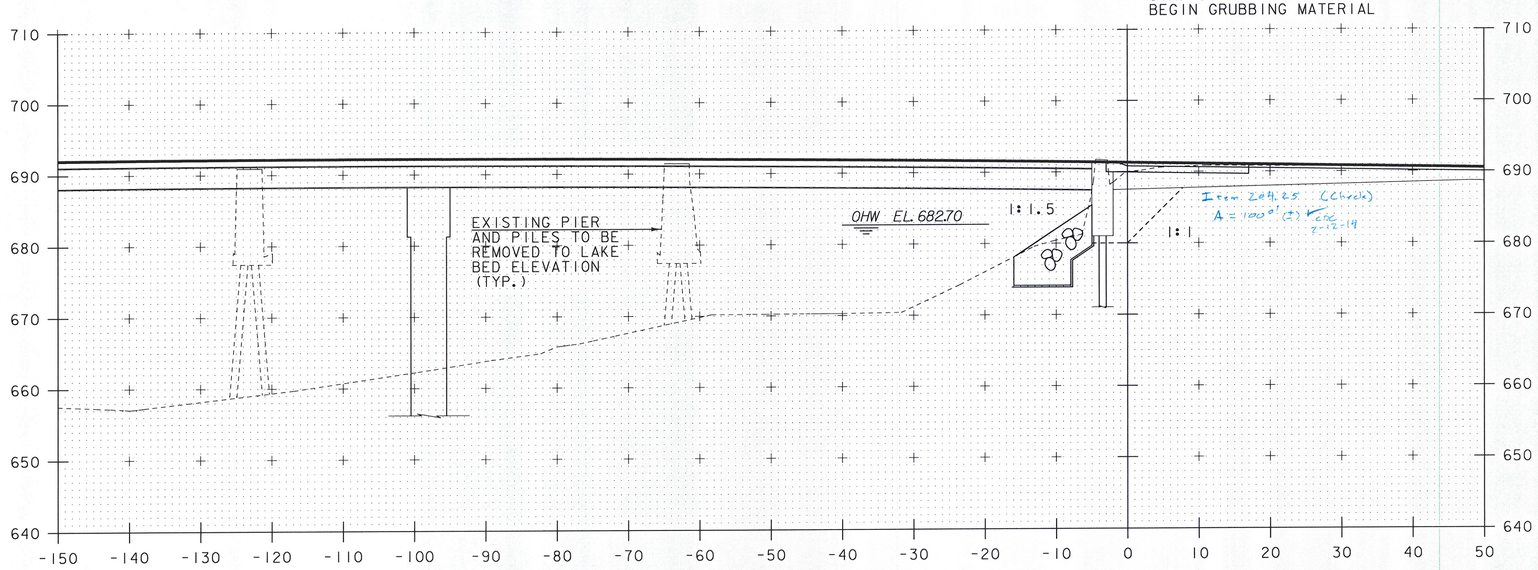
PLOT DATE: 22-NOV-2011
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 64 OF 75

STA. 51+10 RT
END UNCLASSIFIED CHANNEL EXCAVATION
GEOTEXTILE UNDER STONE FILL
STONE FILL, TYPE IV
GRUBBING MATERIAL



51+00

STA. 50+96 RT
END GRANULAR BACKFILL
FOR STRUCTURES
STA. 50+91 RT
BEGIN GRUBBING MATERIAL



STA. 50+86 RT
END STRUCTURE EXCAVATION
STA. 50+91 RT
BEGIN GRUBBING MATERIAL

50+90

CHANNEL RT. STA. 50+90 TO STA. 51+00

PROJECT NAME:	NEWPORT CITY
PROJECT NUMBER:	BRO 1449(25)
FILE NAME: 96J314/STR/96J314xsl.dgn	PLOT DATE: 22-NOV-2011
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: D. PETERSON	CHECKED BY: C. CARLSON
ABUTMENT 2 CHANNEL SECTION 5	SHEET 65 OF 75

EPSC PLAN NARRATIVE

1.1 PROJECT DESCRIPTION

THIS PROJECT IS LOCATED ON TH 11 (RAILROAD SQUARE) IN NEWPORT, VT. THE PROJECT INVOLVES THE CONSTRUCTION OF A REPLACEMENT BRIDGE OVER THE SOUTH BAY OF LAKE MEMPHREMAGOG. THE BRIDGE WILL BE CONSTRUCTED ALONG THE SAME ALIGNMENT. THE BRIDGE WILL BE CLOSED TO TRAFFIC DURING CONSTRUCTION AND TRAFFIC WILL BE DETOURED. THE EXISTING BRIDGE WILL BE COMPLETELY REMOVED INCLUDING EXISTING PIERS, ABUTMENTS, AND SUPERSTRUCTURE.

NOTE: AREA OF DISTURBANCE INCLUDES LIMITS OF EARTH DISTURBANCE WITHIN THE PROJECT AREA, AS WELL AS WASTE, BORROW AND STAGING AREAS, AND OTHER EARTH DISTURBING ACTIVITIES WITHIN OR DIRECTLY ADJACENT TO THE PROJECT LIMITS AS SHOWN ON THE ATTACHED EPSC PLAN.

TOTAL AREA OF DISTURBANCE AS SHOWN ON THE ATTACHED EPSC PLAN IS APPROXIMATELY 0.60 ACRES.

IT IS ANTICIPATED THAT THIS PROJECT WILL LAST TWO CONSTRUCTION SEASONS.

1.2 SITE INVENTORY

1.2.1 TOPOGRAPHY
THE AREA AROUND THIS PROJECT CONSISTS OF AN URBAN SETTING WITH BUILDINGS AND PARKING LOTS ADJACENT TO THE WEST END OF THE PROJECT. THE EAST END CONSISTS OF GRASS SLOPES WITH TREE AND UNDERGROWTH BUFFER AT THE SHORELINE.

1.2.2 DRAINAGE, WATERWAYS, BODIES OF WATER, AND PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES
LAKE MEMPHREMAGOG IS THE ONLY WATER SOURCE ON THE PROJECT SITE. THERE ARE TWO DROP INLETS ON SITE DRAINING FROM THE ROADWAY TO THE LAKE.

1.2.3 VEGETATION
THE VEGETATION IN THE PROJECT AREA CONSISTS OF GRASS SLOPES WITH HARDWOOD TREES AND UNDERGROWTH ALONG THE SHORELINE. THE IMPACT TO VEGETATION WILL BE LIMITED TO THAT WHICH IS DIRECTLY AFFECTED BY REPLACEMENT OF THE EXISTING BRIDGE AND ROADWAY. UPON PROJECT COMPLETION, THE SHORELINE WILL BE ARMORED WITH STONE FILL TYPE IV AS SPECIFIED ON THE PLANS.DISTURBED VEGETATION WILL BE REESTABLISHED WITH STANDARD SEED AND MULCH PRACTICES.

1.2.4 SOILS
ALL SOIL DATA CAME FROM THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE FOR THE COUNTY OF ORLEANS, VERMONT. SOILS ON THE PROJECT SITE ARE NICHOLVILLE VERY FINE SANDY LOAM WITH 15% TO 25% SLOPES, "K FACTOR" = 0.49; AND URBAN LAND-ADAMS-NICHOLVILLE COMPLEX WITH 0% TO 8% SLOPES. THE SOIL IS CONSIDERED HIGHLY ERODIBLE.

NOTE: K-VALUES GENERALLY INDICATE THE FOLLOWING:
0.0-0.23 = LOW EROSION POTENTIAL
0.24-0.36 = MODERATE EROSION POTENTIAL
0.37 AND HIGHER = HIGH EROSION POTENTIAL

1.2.5 SENSITIVE RESOURCE AREAS
CRITICAL HABITATS: NO
HISTORICAL OR ARCHEOLOGICAL AREAS: YES, ARCHEOLOGICAL NEAR APPROACH
PRIME AGRICULTURAL LAND: NO
THREATENED AND ENDANGERED SPECIES: NO
WATER RESOURCE: LAKE MEMPHREMAGOG
WETLANDS: NO

1.3 RISK EVALUATION

THIS PROJECT DOES NOT FALL UNDER THE JURISDICTION OF GENERAL PERMIT 3-9020 FOR STORMWATER RUNOFF FROM CONSTRUCTION SITES. SHOULD CHANGES PRIOR TO OR DURING CONSTRUCTION RESULT IN ONE OR MORE ACRES OF EARTH DISTURBANCE OR SHOULD THE PROJECT BECOME PART OF A LARGER PLAN OF DEVELOPMENT, THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY ADDITIONAL PERMITTING.

1.4 EROSION PREVENTION AND SEDIMENT CONTROL

THE EROSION CONTROL PLANS ARE MEANT AS A GUIDELINE FOR PREVENTING EROSION AND CONTROLLING SEDIMENT TRANSPORT. THE PRINCIPLES OUTLINED IN THIS NARRATIVE CONSIST OF APPLYING MEASURES THROUGHOUT CONSTRUCTION OF THE PROJECT IN ORDER TO MINIMIZE SEDIMENT TRANSPORT TO THE RECEIVING WATERS. THE MEASURES INCLUDE STABILIZATION AND STRUCTURAL PRACTICES, STORM WATER CONTROLS AND OTHER POLLUTION PREVENTION PRACTICES. THEY HAVE BEEN PROPOSED BY THE DESIGNER AS A BASIS FOR PROTECTING RESOURCES AND WILL NEED TO BE BUILT UPON BASED ON THE SPECIFC MEANS AND METHODS OF THE CONTRACTOR. REFER TO THE LOW RISK SITE HANDBOOK AND APPROPRIATE DETAIL SHEETS FOR SPECIFIC GUIDANCE AND CONSTRUCTION DETAILING.

ALL MEASURES SHALL BE REGULARLY MAINTAINED AND SHALL BE CHECKED FOR SEDIMENT BUILD-UP. SEDIMENT SHALL BE DISPOSED OF AT AN APPROVED SITE WHERE IT WILL NOT BE SUBJECT TO EROSION.

1.4.1 MARK SITE BOUNDARIES
SITE BOUNDARIES AND AREAS CONSTRUCTION EQUIPMENT CAN ACCESS SHALL BE DELINEATED.

DUE TO THE PROXIMITY TO LAKE MEMPHREMAGOG, BARRIER FENCE (BF) SHALL BE USED TO PHYSICALLY MARK SITE BOUNDARIES.

1.4.2 LIMIT DISTURBANCE AREA
PREVENTING INITIAL SOIL EROSION BY MINIMIZING THE EXPOSED AREA IS MUCH MORE EFFECTIVE THAN TREATING ERODED SEDIMENT. EARTH DISTURBANCE CAN BE MINIMIZED THROUGH CONSTRUCTION PHASING BY ONLY OPENING UP EARTH AS NECESSARY. THIS CAN LIMIT THE AREA THAT WILL BE DISTURBED AND EXPOSED TO EROSION. EMPLOY TEMPORARY CONSTRUCTION STABILIZATION PRACTICES IN INCREMENTAL STAGES AS PHASES CHANGE. FOR PROJECTS WHICH FALL UNDER THE CONSTRUCTION GENERAL PERMIT, ONLY THE ACREAGE LISTED ON THE PERMIT AUTHORIZATION MAY BE EXPOSED AT ANY GIVEN TIME.

MAINTAINING VEGETATED BUFFERS ALONG STREAM BANKS, WETLANDS OR OTHER SENSITIVE AREAS IS A CRUCIAL EROSION AND SEDIMENT CONTROL MEASURE THAT SHOULD BE ESTABLISHED WHEREVER POSSIBLE.

1.4.3 SITE ENTRANCE/EXIT STABILIZATION
TRACKING OF SEDIMENT ONTO PUBLIC HIGHWAYS SHALL BE MINIMIZED TO REDUCE THE POTENTIAL FOR RUNOFF ENTERING RECEIVING WATERS. INSTALLATION SHALL COINCIDE WITH THE CONTRACTOR'S PROGRESS SCHEDULE.

STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AS PROPOSED ON THE EPSC PLAN AND ANYWHERE EQUIPMENT WILL BE GOING FROM AREAS OF EXPOSED SOILS TO PAVED SURFACES.

1.4.4 INSTALL SEDIMENT BARRIERS
SEDIMENT BARRIERS SHALL BE UTILIZED TO INTERCEPT RUNOFF AND ALLOW SUSPENDED SEDIMENT TO SETTLE OUT. THEY SHALL BE INSTALLED PRIOR TO ANY UP SLOPE WORK.

INLET PROTECTION DEVICES WILL BE INSTALLED AS PROPOSED ON THE EPSC PLAN.

SILT FENCE WILL BE INSTALLED AS PROPOSED ON THE EPSC PLAN.

1.4.5 DIVERT UPLAND RUNOFF
DIVERSIONARY MEASURES SHALL BE USED TO INTERCEPT RUNOFF FROM ABOVE THE CONSTRUCTION AND DIRECT IT AROUND THE DISTURBED AREA SO THAT CLEAN WATER DOES NOT BECOME MUDDIED WHILE TRAVELING OVER EXPOSED SOILS ON THE CONSTRUCITON SITE.

THE PROJECT AREA IS RELATIVELY FLAT. THEREFORE IT IS NOT ANTICIPATED THAT DIVERSION MEASURES WILL BE NECESSARY.

1.4.6 SLOW DOWN CHANNELIZED RUNOFF
NONE OF THE MEASURES TO SLOW DOWN CHANNELIZED RUNOFF WILL BE USED ON THIS PROJECT.

1.4.7 CONSTRUCT PERMANENT CONTROLS
STONE FILL WILL BE USED TO CREATE A STABLE SLOPE AND WILL BE COVERED WITH GRUBBING MATERIAL AND SEED AND MULCH TO PREVENT EROSION.

1.4.8 STABILIZE EXPOSED SOILS DURING CONSTRUCTION
ALL AREAS OF DISTURBANCE MUST HAVE TEMPORARY STABILIZATION IN PLACE WITHIN 48 HOURS OF DISTURBANCE OR IN ACCORDANCE WITH THE CONSTRUCTION GENERAL PERMIT 3-9020 AUTHORIZATION (IF APPLICABLE).

SURFACE ROUGHENING OF ALL EXPOSED SLOPES, COMBINED WITH TEMPORARY MULCHING, SHALL BE UTILIZED ON A REGULAR BASIS. BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED TO STABILIZE ALL SLOPES STEEPER THAN 1:3.

THE FORECAST OF RAINFALL EVENTS SHALL TRIGGER IMMEDIATE PROTECTION OF EXPOSED SOILS.

1.4.9 WINTER STABILIZATION
ALL EARTH DISTURBANCES ASSOCIATED WITH THIS PROJECT SHALL BE STABILIZED PRIOR TO THE WINTER SEASON (OCTOBER 15 THROUGH APRIL 15). SHOULD THE PROJECT CAUSE EARTH DISTURBANCE DURING THE WINTER SEASON, THE CONTRACTOR SHALL PREPARE A WINTER-SPECIFIC EPSC PLAN FOR APPROVAL BY THE CONSTRUCTION ENVIRONMENTAL ENGINEER. REFER TO THE LOW RISK SITE HANDBOOK FOR GUIDANCE.

1.4.10 STABILIZE SOIL AT FINAL GRADE
EXPOSED SOIL MUST BE STABILIZED WITHIN 48 HOURS OF REACHING FINAL GRADE.

ITEM 651.15 "SEED", ITEM 651.25 "HAY MULCH", ITEM 651.18 "FERTILIZER" AND ITEM 651.20 "AGRICULTURAL LIMESTONE" SHALL BE USED TO ESTABLISH PERMANENT VEGETATION. FOR SLOPES STEEPER THAN 1:3, BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED INSTEAD OF MULCH.

1.4.11 DE-WATERING ACTIVITIES
DISCHARGE FROM DEWATERING ACTIVITIES THAT FLOWS OFF OF THE CONSTRUCTION SITE MUST NOT CAUSE OR CONTRIBUTE TO A VIOLATION OF THE VERMONT WATER QUALITY STANDARDS.

TREATMENT OF DEWATERING COFFERDAM IS ANTICIPATED. A LOCATION FOR TREATMENT HAS BEEN PROPOSED AND IS SHOWN ON THE PLANS.

TURBIDITY AND pH WILL BE MONITORED DURING CONSTRUCTION.

IF THE TURBIDITY OF THE WATER WITHIN THE ENCLOSED WORK AREA EXCEEDS THAT OF THE SURROUNDING WATER, THE TURBID WATER WILL BE COLLECTED AND PUMPED TO A CONTAINMENT AREA TO ALLOW THE FINES TO SETTLE.

IF THE pH OF THE WATER DISPLACED BY TREMIE CONCRETE OR WITHIN A CONTAINED WORK AREA IS NOT WITHIN THE RANGE OF pH 6.5 TO pH 8.5, THE WATER WILL BE COLLECTED AND PUMPED TO A CONTAINMENT AREA FOR TREATMENT TO ADJUST THE pH. ONCE IT IS WITHIN THE SPECIFIC RANGE LISTED ABOVE, THE WATER MAY BE DISCHARGED IN TO THE LAKE.

STONE WILL BE FREE OF SILT, CLAY, AND ORGANIC MATERIAL.

1.4.12 INSPECT YOUR SITE
INSPECT THE PROJECT SITE BASED ON SPECIAL PROVISION REQUIREMENTS OR CONSTRUCTION GENERAL PERMIT AUTHORIZATION STIPULATIONS.

1.5 SEQUENCE AND STAGING

THIS SECTION WILL BE DEVELOPED BY THE CONTRACTOR USING THE GUIDANCE OUTLINED IN THE VTRANS EPSC PLAN CONTRACTOR CHECKLIST.

1.5.1 CONSTRUCTION SEQUENCE

1.5.2 OFF-SITE ACTIVITIES
IN ADDITION TO THE CONTRACTOR CHECKLIST ANY ACTIVITIES OUTSIDE THE CONSTRUCTION LIMITS SHALL FOLLOW SUBSECTIONS 105.25- 105.29 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION.

1.5.3 UPDATES

PROJECT NAME:	NEWPORT CITY
PROJECT NUMBER:	BRO 1449(25)

FILE NAME: 96j314/str/96j314ero.dgn	PLOT DATE: 22-NOV-2011
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: D. PETERSON	CHECKED BY: C. CARLSON
EPSC - NARRATIVE	SHEET 66 OF 75

N

VT STATE PLANE GRID

CURVE NO. 1 DATA
Delta = 2°44'45.92"
D = 2°51'53.24" LT.
R = 2000.00'
T = 47.94'
L = 95.85'
E = 0.57'

LEGEND
AER E&T — AERIAL ELECTRIC & TELEPHONE
RIPARIAN BUFFER — RIPARIAN BUFFER ZONE
OHW — ORDINARY HIGH WATER
ARCH — ARCHEOLOGICAL RESOURCES

POB
10+00.00

PC
STA. 10+90.46

PI
STA. 11+38.39

P.T
STA. 11+86.31

CHANNEL POB
STA. 50+00.00

CHANNEL POE
STA. 51+50.00

MATCH LINE STA. 15+50.00

MATCH LINE STA. 15+50.00

LAKE MEMPHREMAGOG

N89°23'54.03"E

N86°39'08.10"E

N3°20'51.90"W

10+00
11+00
12+00
13+00
14+00
15+00

TH 11
(RAILROAD SQUARE)

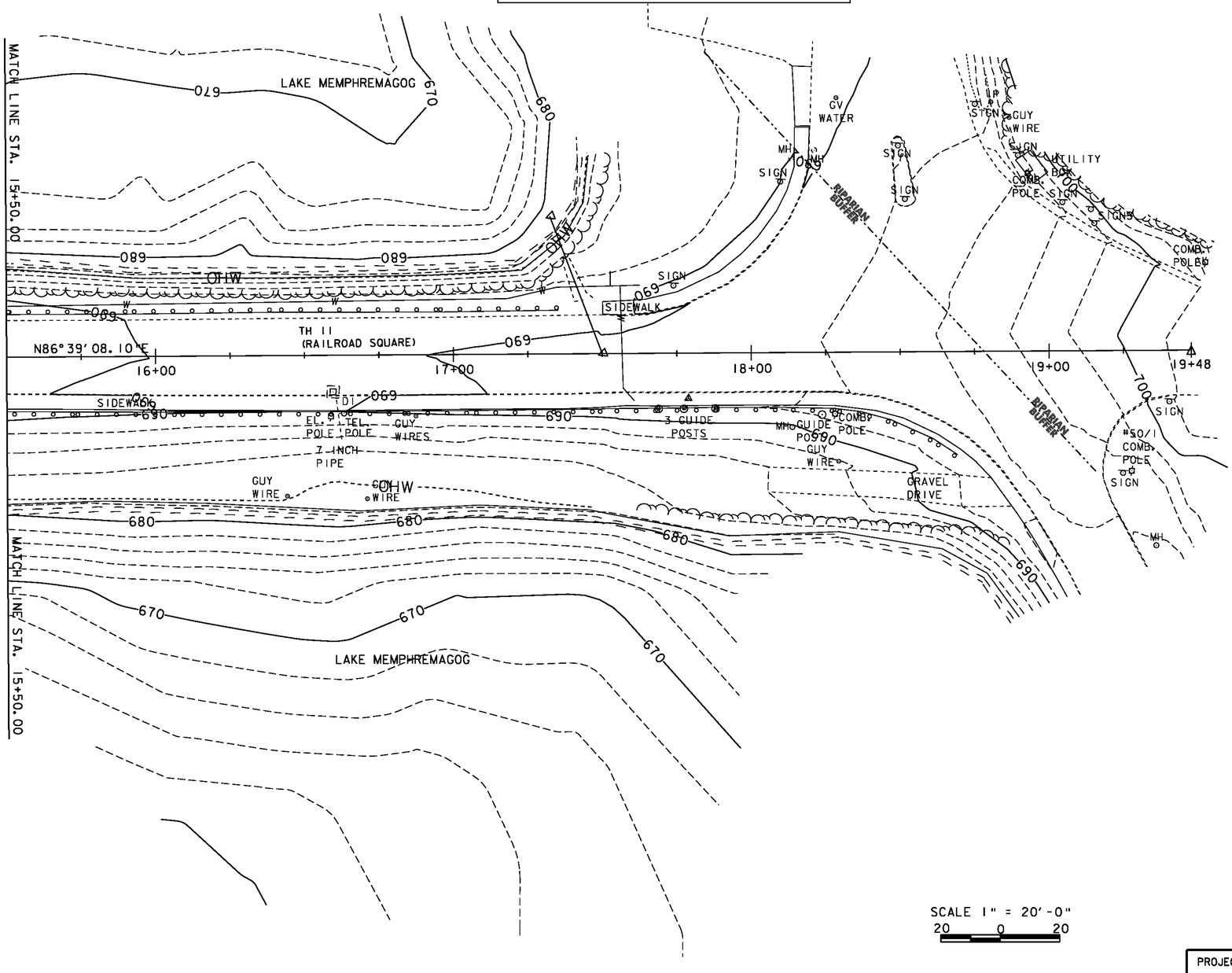
BLDG.
BLDG.
BLDG.
HISTORIC
ARCH
CONC. PAD
WOOD POST
CONC. POST
GUY WIRE
SIGN
SHRUB
COMBI
PVC
CONC. SIDEWALK
SIDEWALK
CONC. WALL
COMB.
MH
SMH
TEL
WATER LINE
OHW
RIPARIAN BUFFER
POPLAR
POPLARS
GATE VALVE
CONC. PAD
WOOD POST

SCALE 1" = 20'-0"
20 0 20

PROJECT NAME:	NEWPORT CITY
PROJECT NUMBER:	BRO 1449(25)
FILE NAME: 96J314\str\j314bdr.dgn	PLOT DATE: 22-NOV-2011
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: D. PETERSON	CHECKED BY: C. CARLSON
EPSC - EXISTING CONDITION 1	SHEET 67 OF 75

LEGEND

— AER E&T —	AERIAL ELECTRIC & TELEPHONE
RIPARIAN BUFFER	RIPARIAN BUFFER ZONE
----OHW-----	ORDINARY HIGH WATER
ARCH ———	ARCHEOLOGICAL RESOURCES



N

VT STATE PLANE GRID

SCALE 1" = 20'-0"

20 0 20

PROJECT NAME:	NEWPORT CITY
PROJECT NUMBER:	BRO 1449(25)

FILE NAME: 96j314\str\j314bdr.dgn	PLOT DATE: 22-NOV-2011
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: D. PETERSON	CHECKED BY: C. CARLSON
EPSC - EXISTING CONDITION 2	SHEET 68 OF 75

N

VT STATE PLANE GRID

POB
10+00.00

BEGIN APPROACH
STA. 10+50.00

PC
STA. 10+90.46

BLDG.

GUY WIRE

TO US RTE 5

10+00

1+00

TH 11
(RAILROAD SQUARE)

SMH

COMBI STORM

8" PVC

ARCH

HISTORIC

CONC. PAD

WOOD POST

CONC. POST

SIGN

CONC. STEPS

CONC. SIDEWALK

AER E&T

COMB.

TEL

END APPROACH/
BEGIN PROJECT
STA. 11+00.00

PI
STA. 11+38.39

PT
STA. 11+86.31

BLDG.

CONC.

RIPARIAN BUFFER

OHW

680

690

670

660

POPLAR

GATE VALVE

CONC. PAD

MH

COMB.

POPLARS

WOOD POST

STONE FILL
TYPE IV

℄ BRG. ABUT. 1
STA. 11+98.00

BEGIN BRIDGE
STA. 11+97.71
F.G. = 689.07

LAKE MEMPHREMAGOG

℄ BRG. PIER NO. 1
STA. 12+87.00

℄ BRG. PIER NO. 2
STA. 14+07.00

FOR WATERLINE DETAILS
SEE SHEET AE2

END BRIDGE
STA. 14+96.83
F.G. = 691.18

℄ BRG. ABUT. 2
STA. 14+96.00

13+00

14+00

15+00

STONE FILL
TYPE IV

CHANNEL POE
STA. 51+50.00

CHANNEL POB
STA. 50+00.00

MATCH LINE STA. 15+50.00

MATCH LINE STA. 15+50.00

LEGEND

- STABILIZED CONSTRUCTION ENTRANCE
- SILT FENCE, WOVEN WIRE REINFORCED
- BF — BARRIER FENCE
- EROSION MATTING
- GEOTEXTILE FOR FILTER CURTAIN
- PROPOSED DEWATERING AREA
- INLET PROTECTION DEVICE
- ----OHW----- ORDINARY HIGH WATER

SCALE 1" = 20'-0"
20 0 20

PROJECT NAME:	NEWPORT CITY
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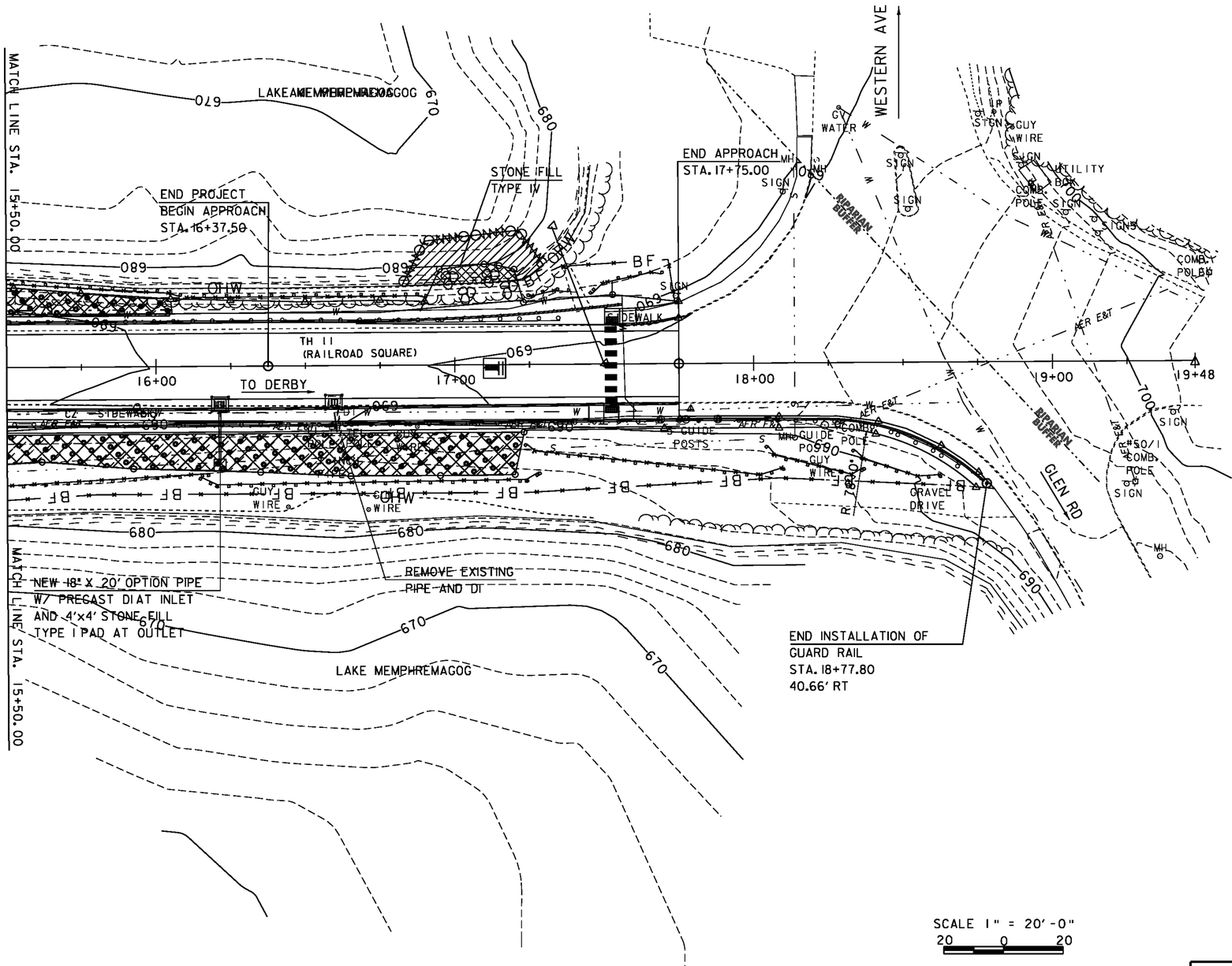
EPSC - PLAN 1	SHEET 69 OF 75



LEGEND

- STABILIZED CONSTRUCTION ENTRANCE
- SILT FENCE, WOVEN WIRE REINFORCED
- BF — BARRIER FENCE
- EROSION MATTING
- GEOTEXTILE FOR FILTER CURTAIN
- PROPOSED DEWATERING AREA
- INLET PROTECTION DEVICE
- ----OHW----- ORDINARY HIGH WATER

N

VT STATE PLANE GRID

SCALE 1" = 20'-0"
20 0 20

PROJECT NAME: NEWPORT CITY
PROJECT NUMBER: BRO 1449(25)

FILE NAME: 96J3I4\str\J3I4bdr.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
EPSC - PLAN 2

PLOT DATE: 22-NOV-2011
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 70 OF 75

N

VT STATE PLANE GRID

LEGEND

AER E&T — AERIAL ELECTRIC & TELEPHONE

EROSION MATTING

LIMITS OF SOIL DISTURBANCE

RIPARIAN BUFFER — RIPARIAN BUFFER ZONE

BEGIN APPROACH
STA. 10+50.00

BLDG.

GUY WIRE

COMB.

8" PVC

EXISTING ROW

SIGN

DI

W

S

10+00

TH 11
(RAILROAD SQUARE)

MH

1+00

SMH

DI

TEL.

AER E&T

EXISTING ROW

END APPROACH/
BEGIN PROJECT
STA. 11+00.00

BLDG.

CONC. SIDEWALK

CONC. WALL

CONC.

BLDG.

RIPARIAN BUFFER

WOOD POST

CONC. PAD

CONC. POST

STONE FILL
TYPE IV

℄ BRG. ABUT. 1
STA. 11+98.00

BEGIN BRIDGE
STA. 11+97.71
F.G. = 689.07

LAKE MEMPHREMAGOG

℄ BRG. PIER NO. 1
STA. 12+87.00

℄ BRG. PIER NO. 2
STA. 14+07.00

FOR WATERLINE DETAILS
SEE SHEET AE2

MAINLINE STA. 15+00.00 =
CHANNEL STA. 50+75.00 = 90°

END BRIDGE
STA. 14+96.83
F.G. = 691.18

℄ BRG. ABUT. 2
STA. 14+96.00

13+00

14+00

15+00

SIDEWALK

CHANNEL POE
STA. 51+50.00

N3° 20' 51.90" W

MATCH LINE STA. 15+50.00

STONE FILL
TYPE IV

CHANNEL POB
STA. 50+00.00

MATCH LINE STA. 15+50.00

POPLAR

GATE VALVE

CONC. PAD

GATE VALVE

MH

COMB.

POPLARS

WOOD POST

670

660

680

690

699

SCALE 1" = 20'-0"
20 0 20

FOR CLARITY, AREAS TO BE SEEDED AND MULCHED HAVE NOT BEEN INDICATED: HOWEVER, ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED AS APPLICABLE.

PROJECT NAME:	NEWPORT CITY
PROJECT NUMBER:	BRO 1449(25)

FILE NAME: 96J314\str\J314bdr.dgn	PLOT DATE: 22-NOV-2011
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: D. PETERSON	CHECKED BY: C. CARLSON
EPSC - FINAL CONDITION 1	SHEET 71 OF 75

LEGEND

— AER E&T — AERIAL ELECTRIC & TELEPHONE

EROSION MATTING

LIMITS OF SOIL DISTURBANCE

RIPARIAN BUFFER — RIPARIAN BUFFER ZONE

MATCH LINE STA. 15+50.00

LAKE MEMPHREMAGOG

670

679

680

END PROJECT
BEGIN APPROACH
STA. 16+37.50

STONE FILL
TYPE IV

089

069

SIDEWALK

TH 11
(RAILROAD SQUARE)

N86° 39' 08. 10"E

TO DERBY

16+00

17+00

18+00

19+00

19+48

CURB

GUIDE POSTS

GUY WIRE

GRAVEL DRIVE

R 78'-0"

END APPROACH
STA. 17+75.00

MH

WATER

WESTERN AVE

SIGN

RIPARIAN BUFFER

UTILITY POLE

COMB. POLE

GLEN RD

690

700

#50/1 COMB. POLE

MATCH LINE STA. 15+50.00

NEW 18" X 20' OPTION PIPE
W/ PRECAST DIAT INLET
AND 4'x4' STONE FILL
TYPE I PAD AT OUTLET

REMOVE EXISTING
PIPE AND DI

END INSTALLATION OF
GUARD RAIL
STA. 18+77.80
40.66' RT

N

VT STATE PLANE GRID

SCALE 1" = 20'-0"
20 0 20

FOR CLARITY, AREAS TO BE SEEDED AND MULCHED HAVE NOT BEEN INDICATED: HOWEVER, ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED AS APPLICABLE.

PROJECT NAME:	NEWPORT CITY
PROJECT NUMBER:	BRO 1449(25)

FILE NAME: 96J314\str\J314bdr.dgn	PLOT DATE: 22-NOV-2011
PROJECT LEADER: C. CARLSON	DRAWN BY: C. MOONEY
DESIGNED BY: D. PETERSON	CHECKED BY: C. CARLSON
EPSC - FINAL CONDITION 2	SHEET 72 OF 75

VAOT RURAL AREA MIX					
	LBS/AC				
% WEIGHT	BROADCAST	HYDROSEED	NAME	GERM %	PURITY %
37.5%	22.5	45	CREEPING RED FESCUE	85%	98%
37.5%	22.5	45	TALL FESCUE	90%	95%
5.0%	3	6	RED TOP	90%	95%
15.0%	9	18	BIRDSFOOT TREFOIL	85%	98%
5.0%	3	6	ANNUAL RYE GRASS	85%	95%
100%	60	120			

VAOT URBAN AREA MIX					
	LBS/AC				
% WEIGHT	BROADCAST	HYDROSEED	NAME	GERM %	PURITY %
42.5%	34	68	CREEPING RED FESCUE	85%	98%
10.0%	8	16	PERENNIAL RYE GRASS	90%	95%
42.5%	34	68	KENTUCKY BLUE GRASS	85%	85%
5.0%	4	8	ANNUAL RYE GRASS	85%	95%
100%	80	160			

SOIL AMENDMENT GUIDANCE			
FERTILIZER		LIME	
BROADCAST	HYDROSEED	BROADCAST	HYDROSEED
10-20-10	*FOLLOW*	PELLETIZED	*FOLLOW*
500 LBS/AC	*MANUFACTURER*	2 TONS/AC	*MANUFACTURER*

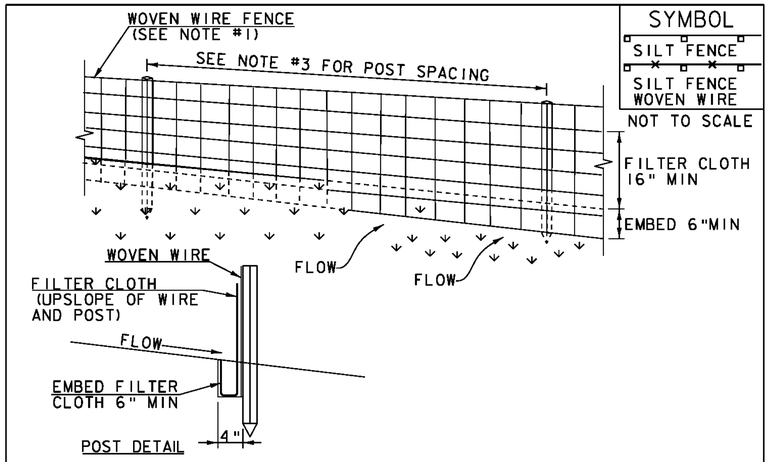
CONSTRUCTION GUIDANCE

1. RURAL SEED MIX: USE AS INDICATED IN THE PLANS AND/OR FOR ALL ESTABLISHED UPLAND (NON WETLAND) AREAS DISTURBED BY THE CONTRACTOR.
2. URBAN SEED MIX: USE AS INDICATED IN THE PLANS AND/OR FOR ALL ESTABLISHED LAWN AREAS DISTURBED BY THE CONTRACTOR.
3. ALL SEED MIXTURES: SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE OF ALL NOXIOUS SEED.
4. FERTILIZER AND LIMESTONE: SHALL FOLLOW RATES SHOWN ON PLAN OR AS DIRECTED BY THE ENGINEER
5. HAY MULCH: TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE, ACHIEVE 90% GROUND COVER OR AS DIRECTED BY THE ENGINEER.
6. TOPSOIL: TO BE USED WITH SEED AS INDICATED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.
7. HYDROSEEDING: ALTHOUGH GUIDANCE IS GIVEN ABOVE THE SITE CONDITIONS AND THE TYPE OF HYDROSEED WILL ULTIMATELY DICTATE THE AMOUNTS AND TYPES OF SOIL AMENDMENTS TO BE APPLIED
8. TURF ESTABLISHMENT: PLACING SEED, FERTILIZER, LIME AND MULCH PRIOR TO SEPTEMBER 15 AND AFTER APRIL 15 CAN BETTER ENSURE A VIGOROUS GROWTH OF GRASS.

ADAPTED FROM VTRANS TECHNICAL LANDSCAPE MANUAL FOR ROADWAYS AND TRANSPORTATION FACILITIES

TURF ESTABLISHMENT

REVISIONS	
JUNE 23, 2009	WHF
JANUARY 15, 2010	WHF
FEBRUARY 16, 2011	WHF



CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE REINFORCED FENCE IS REQUIRED WITHIN 100' UPSLOPE OF RECEIVING WATERS WHEN THE PROJECT FALLS UNDER A CONSTRUCTION STORMWATER PERMIT. WOVEN WIRE SHALL BE A MIN. 14 GAUGE WITH A 6" MAX. MESH OPENING.
2. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI100X, STABILINKA T140N OR APPROVED EQUIVALENT.
3. POST SPACING FOR WIRE-BACKED FENCE SHALL BE 10' MAXIMUM. FOR FILTER-CLOTH FENCE, WHEN ELONGATION IS >50%, POST SPACING SHALL NOT EXCEED 4' AND WHEN ELONGATION IS <50%, POST SPACING SHALL NOT EXCEED 6'.
4. WOVEN WIRE FENCE IS TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES. FILTER CLOTH IS TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY 6" AND FOLDED.
6. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN SEDIMENT REACHES HALF OF FABRIC HEIGHT.

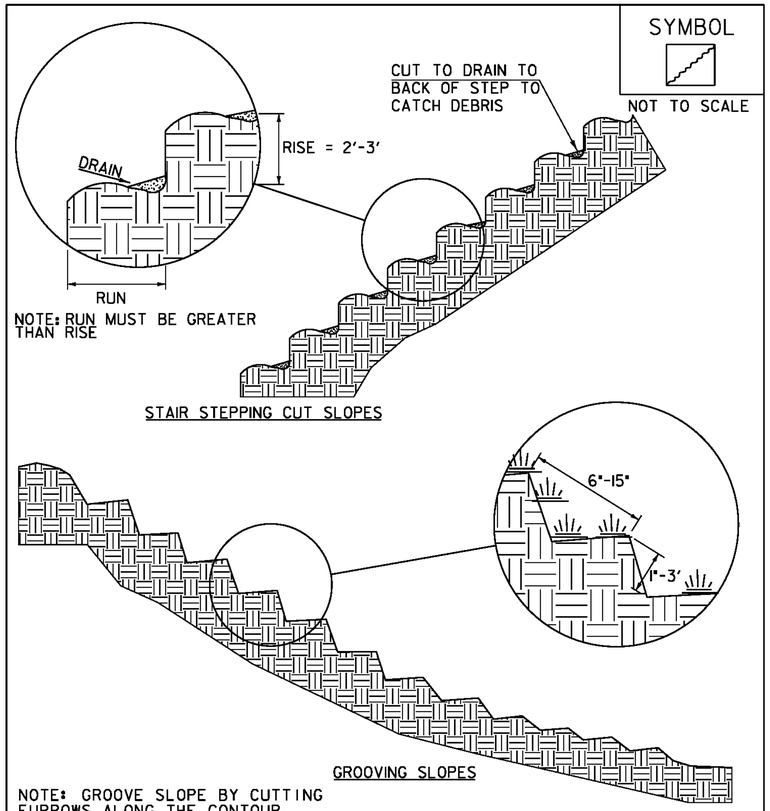
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC ORIGINALLY DEVELOPED BY USDA-NRCS VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SILT FENCE

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 649 AND AS SHOWN IN THE PLANS FOR ~~GEOTEXTILE FOR SILT FENCE (PAY ITEM 649.51) OR~~ GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED (PAY ITEM 649.515).

REVISIONS	
MARCH 21, 2008	WHF
DECEMBER 11, 2008	WHF
JANUARY 13, 2009	WHF



NOTE: GROOVE SLOPE BY CUTTING FURROWS ALONG THE CONTOUR. IRREGULARITIES IN THE SOIL SURFACE CATCH RAINWATER AND RETAIN LIME, FERTILIZER AND SEED.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC ORIGINALLY DEVELOPED BY USDA-NRCS VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SURFACE ROUGHENING

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

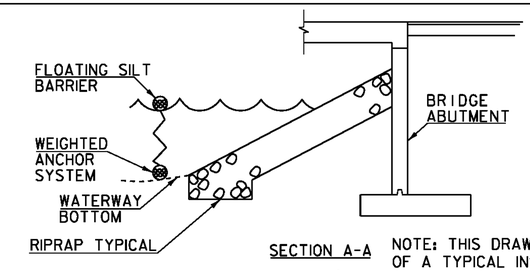
THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT

REVISIONS	
APRIL 1, 2008	WHF
JANUARY 13, 2009	WHF

PROJECT NAME: NEWPORT CITY
PROJECT NUMBER: BRO 1449(25)

FILE NAME: 96J314\str\J314bdr.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
EPSC - DETAIL SHEET 1

PLOT DATE: 22-NOV-2011
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 73 OF 75

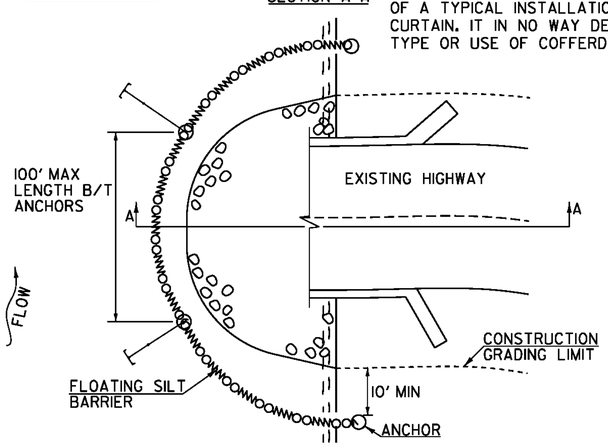


SYMBOL

NOT TO SCALE

SECTION A-A

NOTE: THIS DRAWING IS A DEPICTION OF A TYPICAL INSTALLATION OF FILTER CURTAIN. IT IN NO WAY DEFINES THE TYPE OR USE OF COFFERDAM IF USED.



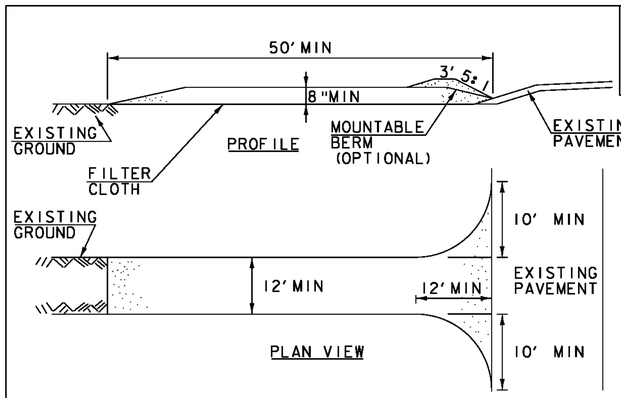
CONSTRUCTION SPECIFICATIONS

1. FILTER CURTAIN SHALL NOT BE PLACED ACROSS A FLOWING WATERWAY, OR IN A WATERWAY WITH STREAM VELOCITIES GREATER THAN 1.5 FEET/SECOND.
2. MAXIMUM 100' LENGTH BETWEEN ANCHORS.
3. LAST SECTION SHALL TERMINATE A MINIMUM OF 10' BEYOND LIMIT OF DISTURBANCE.
4. THE WEIGHTED ANCHOR SYSTEM SHALL BE A TYPE WHICH ALLOWS THE CURTAIN TO CONFORM TO THE BOTTOM OF THE WATERWAY.
5. THE CURTAIN SHALL BE REMOVED BY SLOWLY PULLING TOWARD THE SHORE MINIMIZING THE ESCAPE OF SEDIMENTS INTO WATERWAY.

FILTER CURTAIN

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 649 FOR GEOTEXTILE FOR FILTER CURTAIN (PAY ITEM 649.61).

REVISIONS	
APRIL 1, 2008	WHF
JANUARY 13, 2009	WHF
SEPTEMBER 4, 2009	WHF



SYMBOL

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

1. STONE SIZE- USE 1-4" STONE, RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH- NOT LESS THAN 50' (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30' MINIMUM LENGTH APPLIES).
3. THICKNESS- NOT LESS THAN 8".
4. WIDTH- 12' MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. 24' IF SINGLE ENTRANCE TO SITE.
5. GEOTEXTILE MUST BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING STONE.
6. SURFACE WATER- ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY, ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED ACCORDING TO PERMIT REQUIREMENTS.

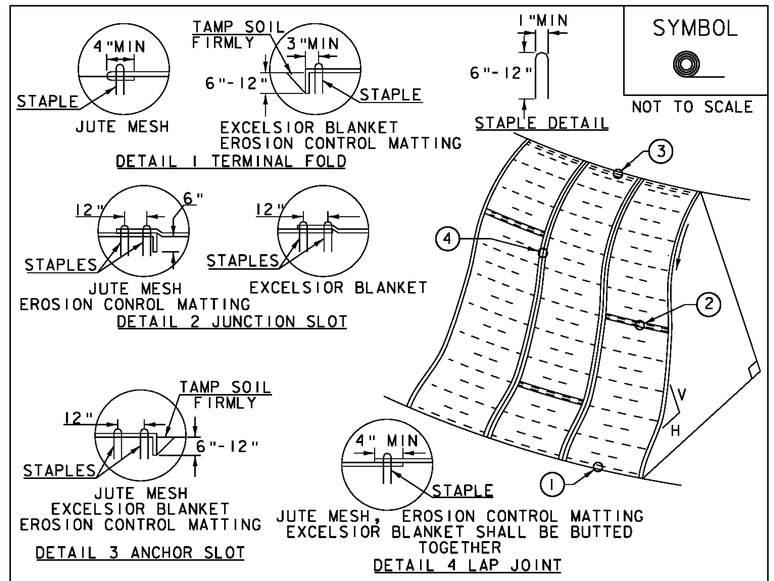
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

STABILIZED CONSTRUCTION ENTRANCE

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR VEHICLE TRACKING PAD (PAY ITEM 653.35) OR AS SPECIFIED IN THE CONTRACT.

REVISIONS	
MARCH 24, 2008	WHF
JANUARY 13, 2009	WHF



SYMBOL

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

1. APPLY TO SLOPES GREATER THAN 3H:1V OR WHERE NECESSARY TO AID IN ESTABLISHING VEGETATION.
2. APPLY FERTILIZER, LIME SEED PRIOR TO PLACING MATTING.
3. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 4'X225' ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 4'X150' ROLL OF MATERIAL.
4. DISTURBED AREAS SHALL BE SMOOTHLY GRADED. EROSION CONTROL MATERIAL SHALL BE PLACED LOOSELY OVER GROUND SURFACE. DO NOT STRETCH.
5. ALL TERMINAL ENDS AND TRANSVERSE LAPS SHALL BE STAPLED AT APPROXIMATELY 12" INTERVALS.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

ROLLED EROSION CONTROL PRODUCT (RECP) SIDE SLOPE

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.
THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 AND AS SHOWN IN THE PLANS FOR TEMPORARY EROSION MATTING (PAY ITEM 653.20) ~~OR PERMANENT EROSION MATTING (PAY ITEM 653.21).~~

REVISIONS	
APRIL 16, 2007	JMF
JANUARY 13, 2009	WHF

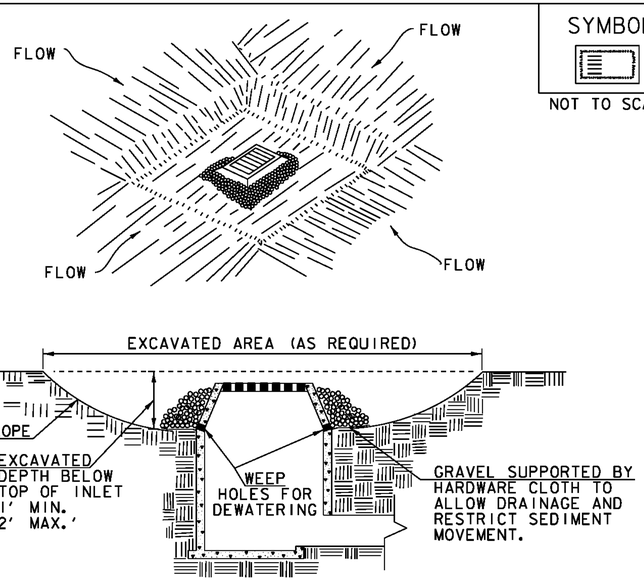
PROJECT NAME: NEWPORT CITY
PROJECT NUMBER: BRO 1449(25)

FILE NAME: 96J3I4\str\J3I4bdr.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
EPSC - DETAIL SHEET 2

PLOT DATE: 22-NOV-2011
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 74 OF 75

SYMBOL

NOT TO SCALE



CONSTRUCTION SPECIFICATIONS

1. CLEAR THE AREA OF ALL DEBRIS THAT WILL HINDER EXCAVATION.
2. GRADE APPROACH TO THE INLET UNIFORMLY AROUND THE BASIN.
3. WEEP HOLES SHALL BE PROTECTED BY GRAVEL.
4. UPON STABILIZATION OF CONTRIBUTING DRAINAGE AREA, SEAL WEEP HOLES, FILL BASIN WITH STABLE SOIL TO FINAL GRADE, COMPACT IT PROPERLY AND STABILIZE WITH PERMANENT SEEDING.
5. MAXIMUM DRAINAGE AREA 1 ACRE

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

EXCAVATED DROP INLET PROTECTION

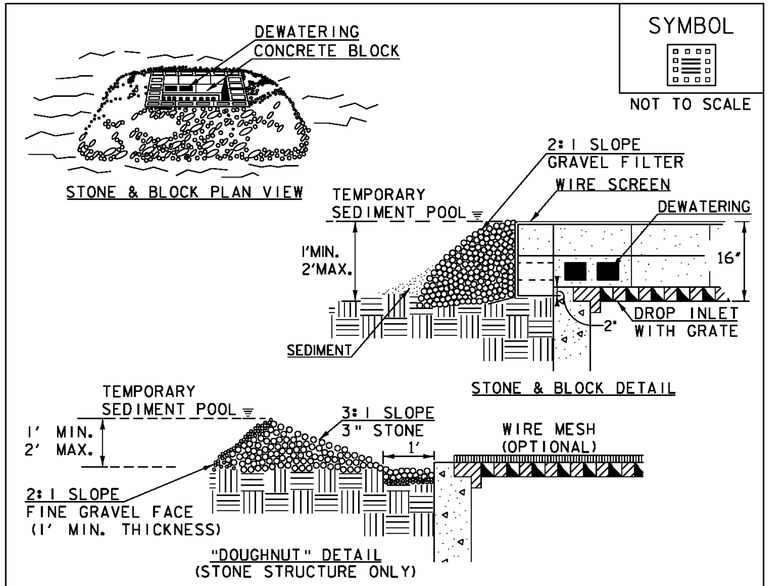
NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR INLET PROTECTION DEVICE, TYPE I (PAY ITEM 653.40).

REVISIONS	
MARCH 6, 2008	WHF
JANUARY 13, 2009	WHF

SYMBOL

NOT TO SCALE



CONSTRUCTION SPECIFICATIONS

1. LAY ONE BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SIDE FOR DEWATERING. FOUNDATION SHALL BE 2" MINIMUM BELOW REST OF INLET AND BLOCKS SHALL BE PLACED AGAINST INLET FOR SUPPORT.
2. HARDWARE CLOTH OR ½" WIRE MESH SHALL BE PLACED OVER BLOCK OPENINGS TO SUPPORT STONE.
3. USE CLEAN STONE OR GRAVEL ½"- ¾" IN DIAMETER PLACED 2" BELOW TOP OF THE BLOCK ON A 2:1 SLOPE OR FLATTER.
4. FOR STONE STRUCTURES ONLY, A 1' THICK LAYER OF THE FILTER STONE WILL BE PLACED AGAINST THE 3" STONE AS SHOWN ON THE DRAWINGS.
5. MAXIMUM DRAINAGE AREA 1 ACRE

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

STONE & BLOCK DROP INLET PROTECTION

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR INLET PROTECTION DEVICE, TYPE I (PAY ITEM 653.40).

REVISIONS	
MARCH 6, 2008	WHF
JANUARY 13, 2009	WHF

PROJECT NAME: NEWPORT CITY
PROJECT NUMBER: BRO 1449(25)

FILE NAME: 96J314\str\J314bdr.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: D. PETERSON
EPSC - DETAIL SHEET 3

PLOT DATE: 22-NOV-2011
DRAWN BY: C. MOONEY
CHECKED BY: C. CARLSON
SHEET 75 OF 75

VERMONT

Structures Copy

State of Vermont
PDD/Structures Design Section
National Life Building – Drawer 33
Montpelier, VT 05633-5001
www.aot.state.vt.us

Agency of Transportation

[phone] 802-828-2621
[fax] 802-828-3566
[ttd] 800-253-0191

DATE: October 12, 2012

Merrimack Sheet Metal
119 Hall Street
Concord, NH 03301

Project Name: Newport City **Project #: BRO 1449(25)**

Structure Identification: Bridge #9 over the South Bay of Lake Memphremagog

The following **Item 900.640, Special Provision (Bridge Railing, Galv. Metal Baluster Railing/Concrete Parapet Combination))** details and welding procedures for the above project transmitted and received by our office on October 3, 2012 have been reviewed and are being returned herewith.

Sheets: **F1, F2, F3 and the welding procedure** **are approved "As Noted".**
Please make appropriate changes as indicated on these "as noted" drawings and submit white prints for our use in the record plans for this project.

You must provide notice to our fabrication inspector, Jeff Clark, as to the date fabrication represented by these drawings will begin. That notice must be received and acknowledged at least seven days prior to that date, as per Specification 506.03. Jeff may be contacted by phone at (802)828-0044 or email at jeff.clark@state.vt.us. Any material fabricated prior to the notification date is subject to rejection without further cause.

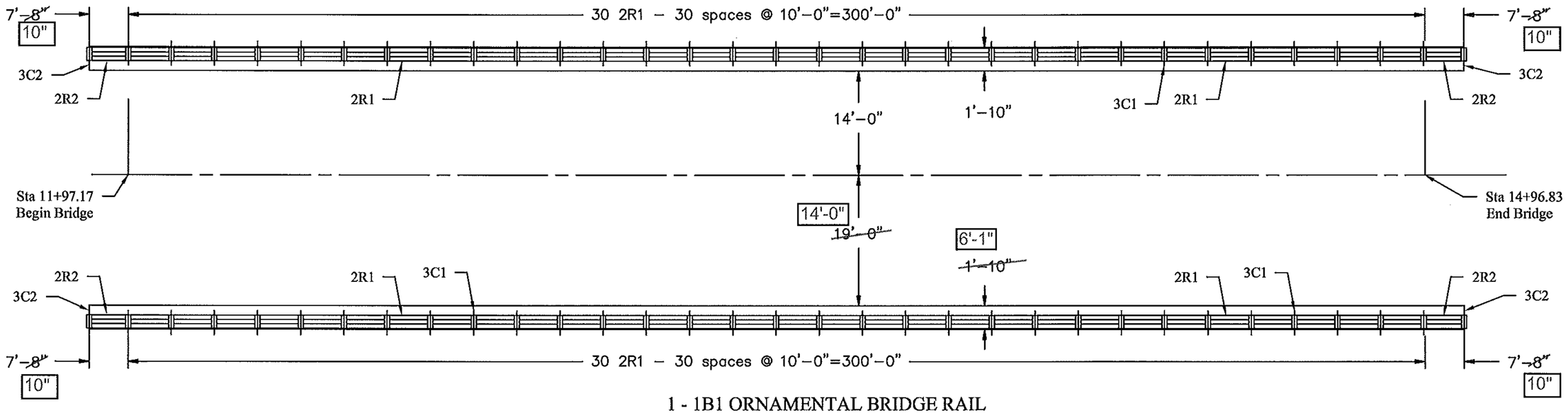
Sincerely,

Carolyn W. Carlson

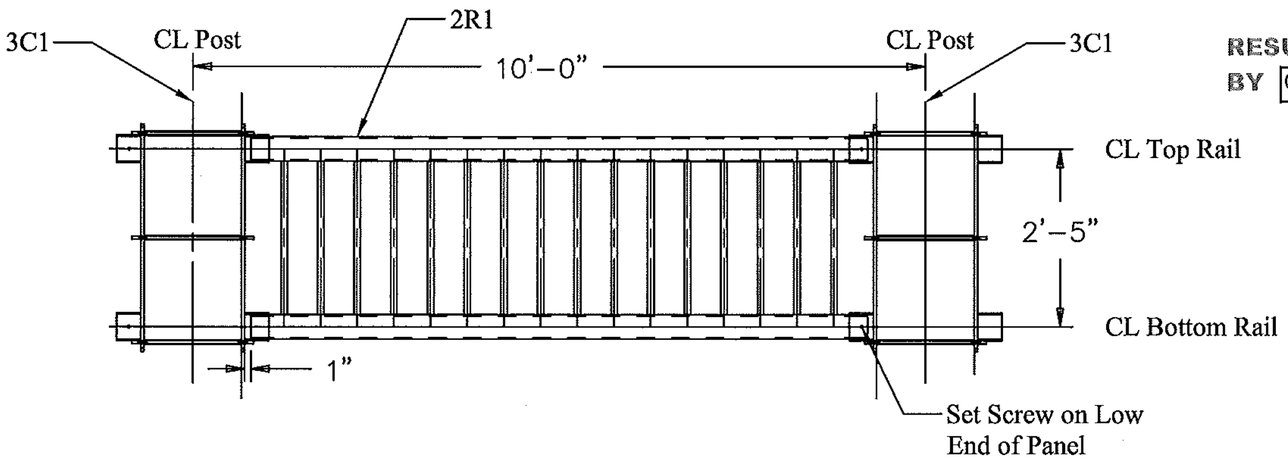
Carolyn W. Carlson, PE
Structures Project Manager

Attachments
cc: [x] Resident Engineer Chris Craig w/prints
[x] Shop Inspector Jeff Clark w/prints
[x] Contractor: Reed & Reed Inc. w/prints
[x] Construction Division – letter only
[x] Materials & Research Section (C&IA Unit) – letter only
[x] Files (Structures & Central)

VTrans Working to Get You There
Vermont Agency of Transportation



1 - 1B1 ORNAMENTAL BRIDGE RAIL



STANDARD RAIL SECTION

BILL OF MATERIALS				
QTY	MARK	SHAPE	LENGTH	REMARKS
1	1B1	ORNAMENTAL BRIDGE RAIL		
60	2R1	BRIDGE RAIL STD SECTION		
4	2R2	BRIDGE RAIL END SECTION		
62	3C1	POST CONNECTION STD		
4	3C2	POST CONNECTION END		

Vermont Agency of Transportation

RECEIVED

CK'D BY David Peterson OK'D BY G. ROY

Oct 04, 2012

RESUBMIT APPROVED AS NOTED

BY C. CARLSON DATE 10/12/12

		DATE SUBMITTED
0	4-4-2012	SUBMITTED FOR APPROVAL
REV NO.	DATE	DESCRIPTION

HOLES AS NOTED

MATERIAL: AASHTO M 270 GRADE 250 GALV PAINTED BLACK

DRAWING COVERS

ORNAMENTAL BRIDGE RAIL LAYOUT

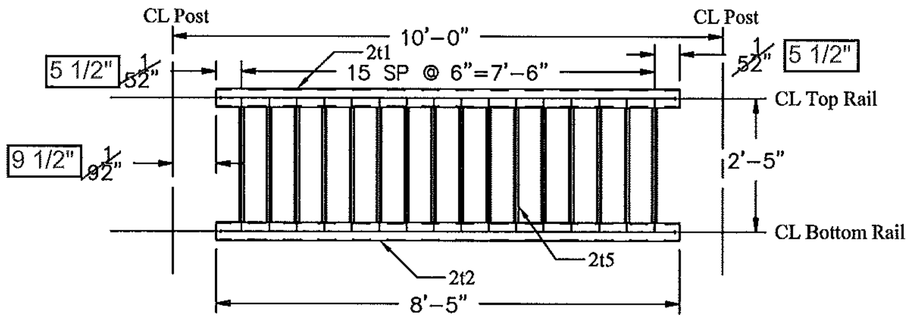
	PROJECT	NEWPORT CITY BRO 1449(25)
	LOCATION	RAILROAD SQUARE OVER LAKE MEMPHREMAGOG
	ENGINEER	STATE OF VERMONT AGENCY OF TRANSPORTATION
	CUSTOMER	REED & REED, INC.

MERRIMACK SHEET METAL

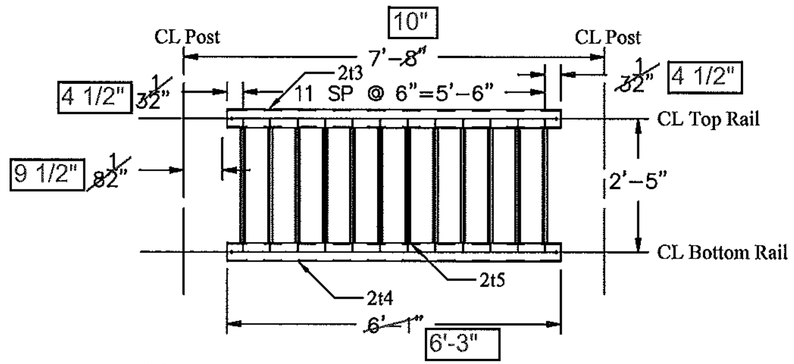
119 HALL STREET
CONCORD NH 03301

Tel. 603.224.7766
Fax 603.224.7925

DRAWN BY:	RL
CHECKED BY:	JD
JOB NO:	#4255
DWG:	F1



(60) - 2R1 BRIDGE RAIL STANDARD SECTION

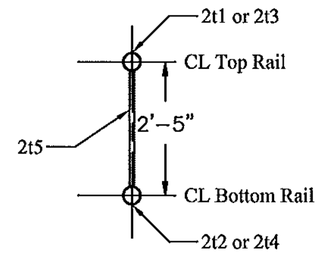


(4) - 2R2 BRIDGE RAIL END SECTION

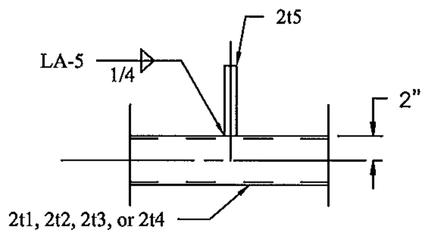
BILL OF MATERIALS				
QTY	MARK	SHAPE	LENGTH	REMARKS
60	2R1	Bridge Rail Standard Section		
60	2t1	Pipe 3 1/2 x Sched 40	8'-5"	
60	2t2	Pipe 3 1/2 x Sched 40	8'-5"	
960	2t5	Pipe 3/4 x Sched 40	2'-1"	
4	2R2	Bridge Rail End Section		
4	2t3	Pipe 3 1/2 x Sched 40	~~6'-1"~~	6'-3"
4	2t4	Pipe 3 1/2 x Sched 40	~~6'-1"~~	6'-3"
48	2t5	Pipe 3/4 x Sched 40	2'-1"	

BRIDGE RAIL NOTES

1. BASE PLATES SHALL CONFORM TO AASHTO M270 GRADE 250.
2. STEEL PIPE FOR TOP AND BOTTOM RAIL, AND BALUSTERS SHALL BE SEAMLESS, CONFORMING TO ASTM A53, GRADE B.
3. HIGH STRENGTH BOLTS AND NUTS SHALL CONFORM TO ASTM 325, TYPE I.
4. ALL METAL RAILING PIPES, POSTS, BALUSTERS, BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AFTER FABRICATION IN CONFORMANCE WITH AASHTO M252 (ASTM A53) AND AASHTO M111 (ASTM (A123) AND PAINTED BLACK (COLOR CHIP #27038).



SECTION VIEW



BALUSTER DETAIL

Vermont Agency of Transportation

RECEIVED

CK'D BY David Peterson OK'D BY G. ROY

Oct 04, 2012

RESUBMIT BY C. CARLSON

APPROVED AS NOTED

DATE 10/12/12

		DATE SUBMITTED
0	4–13–2012	SUBMITTED FOR APPROVAL
REV NO.	DATE	DESCRIPTION
HOLES AS NOTED		
MATERIAL: ASTM 53 GRADE B GALV PAINTED BLACK		

DRAWING COVERS

ORNAMENTAL BRIDGE RAIL SECTIONS

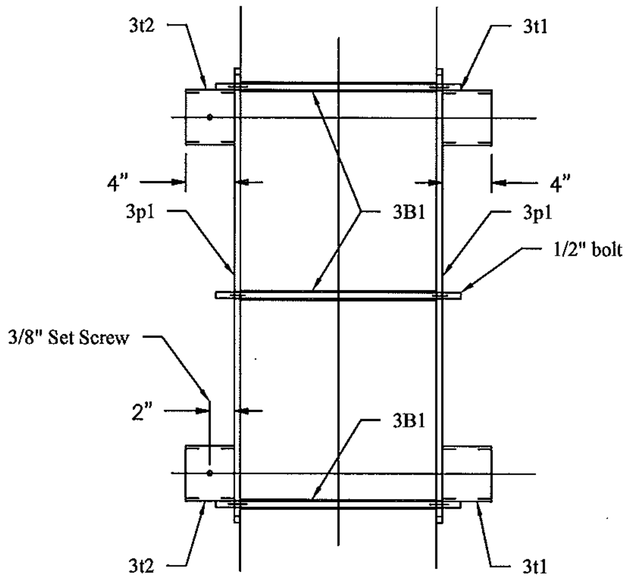
	PROJECT	NEWPORT CITY BRO 1449(25)
	LOCATION	RAILROAD SQUARE OVER LAKE MEMPHREMAGOG
	ENGINEER	VERMONT AGENCY OF TRANSPORTATION
	CUSTOMER	REED & REED, INC.

MERRIMACK SHEET METAL

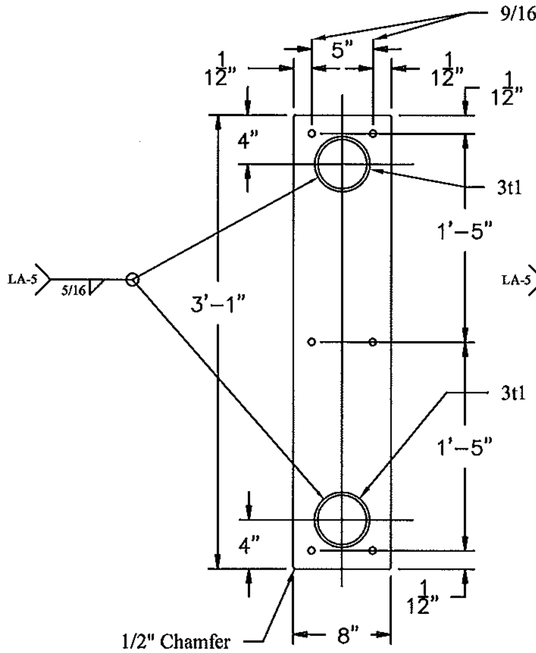
119 HALL STREET
CONCORD NH 03301

Tel. 603.224.7766
Fax 603.224.7925

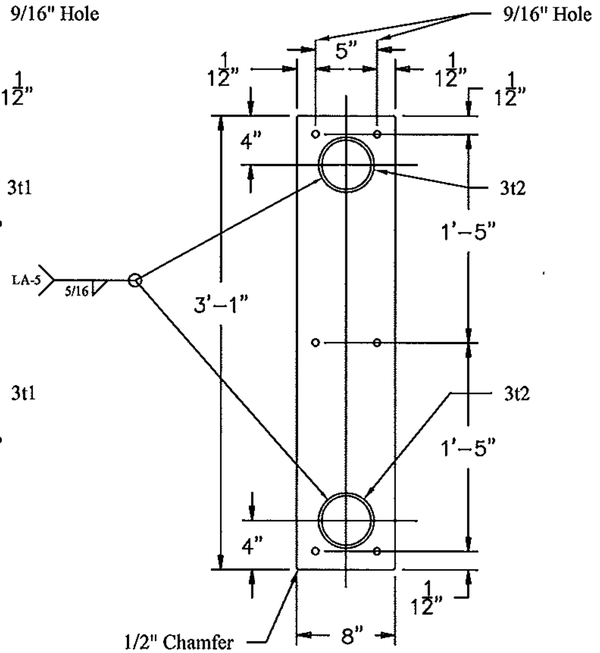
DRAWN BY:	RL
CHECKED BY:	JD
JOB NO:	#4255
DWG:	F2



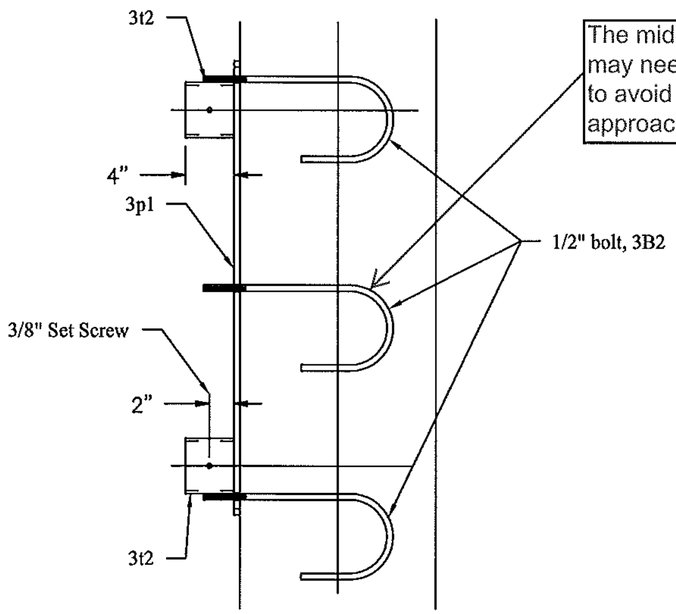
(62) - 3C1 POST CONNECTION STANDARD



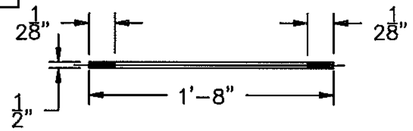
(62) - 3p1 and (124) - 3t1 Detail



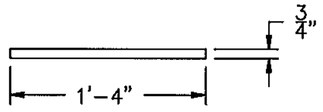
(66) - 3p1 and (132) - 3t2 Detail



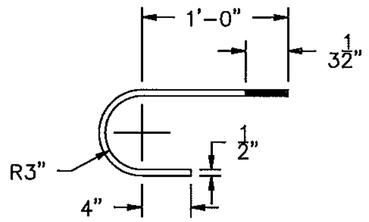
(4) - 3C2 POST CONNECTION END



(372) - 3B1 THRU BOLT DETAIL



(372) - 3t3 PIPE SLEEVE DETAIL



(24) - 3B2 HOOK BOLT DETAIL

BILL OF MATERIALS

QTY	MARK	SHAPE	LENGTH	REMARKS
372	3B1	1/2" THRU BOLT & SLEEVE		
372	3t3	Pipe 1/2" x Sched 40	1'-4"	
372		1/2" Anchor Bolt x 1'-8" Lg with 2 - 1/2" Steel Hex Nuts		
24	3B2	1/2" HOOK BOLT		
24		1/2" Anchor Bolt x 2'-3" Lg with 1 - 1/2" Steel Hex Nuts		
62	3C1	POST CONNECTION STD		
372	3B1	1/2" Thru Bolt & Sleeve		
124	3p1	Plate 1/2" x 8"	3'-1"	
124	3t1	Pipe 4" x Sched 40	0'-4"	
124	3t2	Pipe 4" x Sched 40	0'-4"	
124		3/8" Set Screws		
4	3C2	POST CONNECTION END		
24	3B2	1/2" Hook Bolt		
4	3p1	Plate 1/2" x 8"	3'-1"	
8	3t2	Pipe 4" x Sched 40	0'-4"	
8		3/8" Set Screws		

Vermont Agency of Transportation

RECEIVED

CK'D BY David Peterson OK'D BY G. ROY

Oct 04, 2012

RESUBMIT APPROVED AS NOTED

BY C. CARLSON DATE 10/12/12

REV NO.	DATE	DESCRIPTION
		DATE SUBMITTED
0	4-4-2012	SUBMITTED FOR APPROVAL

HOLES AS NOTED

MATERIAL: AASHTO M 270 GRADE 250 GALV PAINTED BLACK

DRAWING COVERS

ORNAMENTAL BRIDGE RAIL POST DETAILS

PROJECT	NEWPORT CITY BRO 1449(25)
LOCATION	RAILROAD SQUARE OVE RLAKE MEMPHREMAGOG
ENGINEER	VERMONT AGENCY OF TRANSPORTATION
CUSTOMER	REED & REED, INC.

MERRIMACK SHEET METAL

119 HALL STREET
CONCORD NH 03301

Tel. 603.224.7766
Fax 603.224.7925

DRAWN BY: RL

CHECKED BY: JD

JOB NO: #4255

DWG: F3

Is there a PQR?
It needs to be submitted.

WELDING PROCEDURE SPECIFICATION (WPS)
PREQUALIFIED ☐ QUALIFIED BY TESTING ■
or PROCEDURE QUALIFICATION RECORDS (PQR) Yes ☐
AASHTO/AWS D1.5 Qualification Type 5.12.1 ☐ – 5.12.2 ☐ – 5.13 ☐

Contractor/
Organization MERRIMACK SHEET METAL
Welding Process(es) GMAW
Type: Manual ☐ Semiautomatic ■
Machine ☐ Automatic ☐
Tandem ☐ Parallel ☐

JOINT DESIGN USED
Single ■ Double Weld ■
Backing: Yes ☐ No ■ Material
Root Opening NA Root Face Dimension NA
Groove Angle NA Radius (J–U)
Backgouging: Yes ☐ No ■ Method
Root Treatment CLEAN TO BRIGHT METAL

BASE METALS
Material Spec. A36; A588; A709;
Type or Grade G50
Thickness: Groove NA Fillet UNLIMITED
Diameter (Pipe) NA

FILLER METALS
AWS Specification A5.28
AWS Classification ER80S-Ni1
Manufacturer Trade Name LINCOLN SUPERARC LA-75

SHIELDING
Flux NA Mfg. Trade Name NA
Electrode-Flux (Class) NA
Gas Composition 90% ARGON / 10% CO2
Flow Rate 45 CFH Gas Cup Size 3/4

Identification LA-5
Revision 0 Date 6/1/2010 By KK
Authorized by KK Date 6/1/2010
Supporting PQR No.(s) PQLA1

POSITION
Position of Groove NA Fillet 1F or 2F
Vertical Progression: Up ■ Down ☐

ELECTRICAL CHARACTERISTICS
Transfer Mode (GMAW): Globular ☐ Spray ■
Current: AC ☐ DCEP ■ DCEN ☐ Pulsed ☐
Electrical Stick Out 3/4
Other

TECHNIQUE
Stringer or Weave Bead BOTH
Multi-pass or Single Pass (per side) BOTH
Number of Electrodes 1
Electrode Spacing: Longitudinal NA
Lateral NA Angle NA
Interpass Cleaning CLEAN WITH WIRE BRUSH

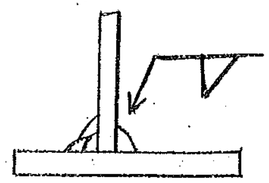
PREHEAT
Preheat Temp., Min. 70 F
Interpass Temp., Min. 70 F
Interpass Temp., Max. 400 F

POSTWELD HEAT TREATMENT
Temp. NA Hold Time NA
Heating/Cooling Rate NA

HEAT INPUT
Calculated Heat Input Value: kJ/in ■ kJ/mm ☐
Max. Heat Input 42.7 Min. Heat Input 22.5

WELDING PROCEDURE

Pass or Weld Layer(s)	Process	Filler Metals Diam.	Current Type & Polarity	Current Amps or Wire Feed Speed	Volts	Travel Speed	Joint Details
ROOT 3/16	GMAW	.045	DCEP	220- 260	26-29	15-18 IPM	LA-5-1F
ROOT 1/4	GMAW	.045	DCEP	220- 260	26-29	14-17 IPM	
ROOT 5/16	GMAW	.045	DCEP	220-270	26-29	13-16 IPM	
ROOT 3/8	GMAW	.045	DCEP	220-270	26-29	12-15 IPM	
2ND 3/8	GMAW	.045	DCEP	220-270	26-29	11-14 IPM	
3RD 3/8	GMAW	.045	DCEP	220-270	26-29	11-14 IPM	
ROOT 7/16	GMAW	.045	DCEP	220-270	26-29	12-15 IPM	
2ND 7/16	GMAW	.045	DCEP	220-270	26-29	12-14 IPM	
3RD 7/16	GMAW	.045	DCEP	220-270	26-29	12-15 IPM	



Form L-2

Vermont Agency of Transportation
RECEIVED
CK'D BY David Peterson OK'D BY JWC
Oct 04, 2012
RESUBMIT APPROVED AS NOTED
BY CWC DATE 10/05/12

Form L-2—Sample Welding Proce

VERMONT

State of Vermont
PDD/Structures Design Section
National Life Building -- Drawer 33
Montpelier, VT 05633-5001
www.aot.state.vt.us

Agency of Transportation

[phone] 802-828-2621
[fax] 802-828-3566
[ttd] 800-253-0191

DATE: December 17, 2012

Moulson North Corporation
10 Iron Trail Road
Biddeford, ME 04005

Project Name: Newport City **Project #: BRO 1449(25)**

Structure Identification: Bridge #9 over the South Bay of Lake Memphremagog

The following **Item 679.21, Light Pole Base, Item 679.45, Light Pole and Item 679.50, Luminaire** details for the above project transmitted and received by our office on August 20th, 2012 have been reviewed and are being returned herewith.

Sheets: 1 **is approved "As Noted".**
2 thru 6 **are approved.**

Sincerely,

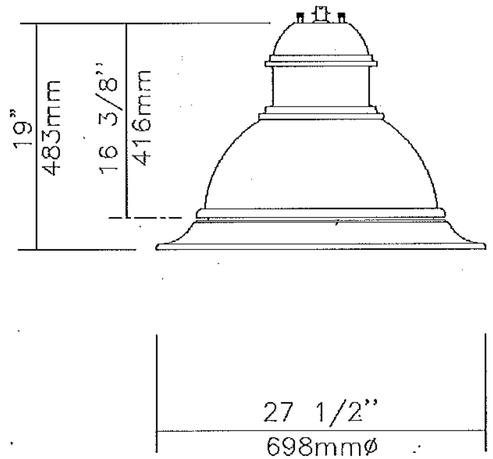
Carolyn W. Carlson, PE
Structures Project Manager

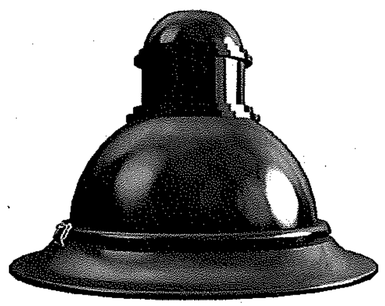
Attachments
cc: [x] Resident Engineer Chris Craig w/prints
[ ] Shop Inspector Jeff Clark w/prints
[x] Contractor: Reed & Reed Inc. w/prints
[x] Construction Division – letter only
[x] Materials & Research Section (C&IA Unit) – letter only
[x] Files (Structures & Central)

Instructions to User

VTrans Working to Get You There
Vermont Agency of Transportation

Newport Bridge





EPA: 1.42 sq ft / weight: 42 lb (19.09 kg)
Note: 3D image may not represent color or option selected.
Logos above include link, click to access.

Qty 1 Luminaire **DMS50-65W49LED4K-ES-LE2F-~~VOLT~~-GN4TX**

Description of Components: 120V

Hood: A die cast A360.1 aluminum dome complete with a cast-in technical ring with latch and hinge. The mechanism shall offer toolfree access to the inside of the luminaire. An embedded memory-retentive gasket shall ensure weatherproofing.

Skirt: A die cast A360 aluminum skirt complete with a cast-in technical ring.

Housing: In a round shape, this housing is made of cast 356 aluminum, c/w a watertight grommet, mechanically assembled to the bracket with four bolts 3/8-16 UNC. This suspension system permits for a full rotation of the luminaire in 90 degree increments.

Light Engine: LifeLED™ composed of 5 main components: **Lens / LED lamp / Optical System / Heat Sink / Driver**
Electrical components are RoHS compliant.

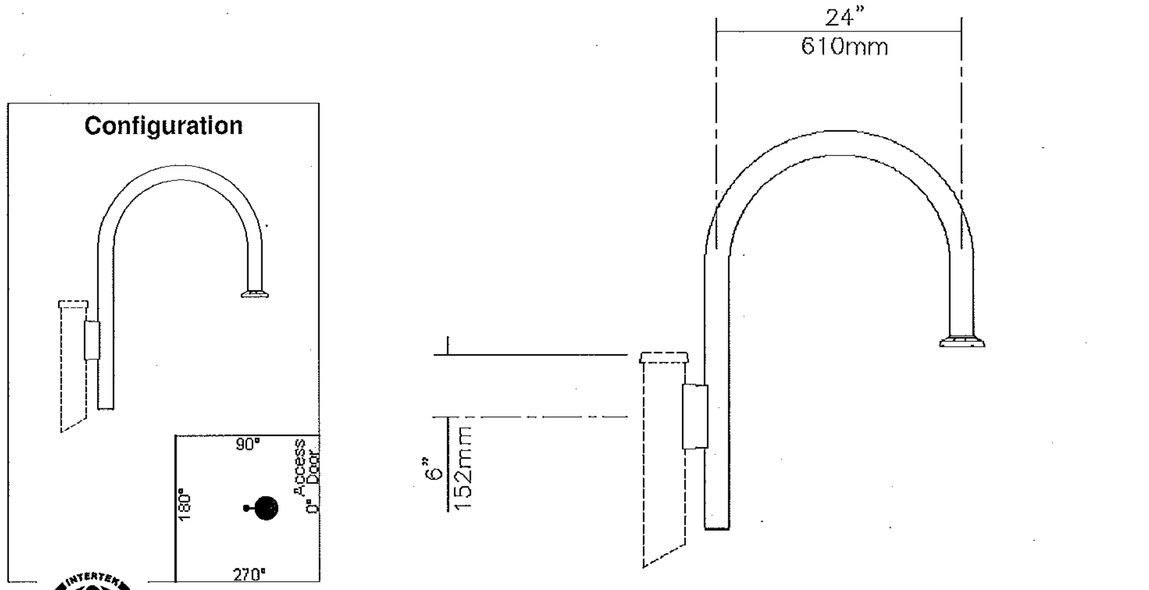
Lens: Made of soda-lime tempered glass lens, mechanically assembled and sealed onto the lower part of the heat sink.

Lamp: *(Included)*, Lamp type Philips Lumileds Rebel ES. Composed of 49 high-performance white LEDs, 65w lamp wattage. Color temperature of 4000 Kelvin nominal, 70 CRI. Operating lifespan after which the system emits 70% of its original lumen output, all of those parameters are tested for 100% of light engines. Use of a metal core board insures greater heat transfer and longer lifespan of the light engine.

Optical System: (LE2F), I.E.S type II (asymmetrical). Composed of high-performance acrylic collimators, optimized with varying beam angles to achieve desired distribution. System is rated IP66. Performance shall be tested per LM63 and LM79 (IESNA) certifying its photometric performance. Street-side indicated.

Vermont Agency of Transportation
RECEIVED
CK'D BY D. PETERSON OK'D BY C. CARLSON
08/20/2012
RESUBMIT _____ APPROVED AS NOTED
BY C. CARLSON DATE 12/14/2012

PHILIPS
LUMEC
640, Curé-Boivin
Boisbriand (Québec)
Canada, J7G 2A7



Qty 1 Bracket **IF-1A-GN4TX**

Description of Components:

Arm: Shall be made from 6061-T6 aluminum tubing, 2 3/8in. (60mm) outside diameter, mechanically assembled.

Vermont Agency of Transportation
RECEIVED
CK'D BY D. PETERSON OK'D BY C. CARLSON
08/20/2012
RESUBMIT ____ APPROVED X
BY C. CARLSON DATE 12/14/2012

PHILIPS
LUMEC
640, Curé-Boivin
Boisbriand (Québec)
Canada, J7G 2A7

Miscellaneous

Description of Components:

Wiring: Gauge (#14) TEW/AWM 1015 or 1230 wires, 6" (152mm) minimum exceeding top of pole.

Hardware: All exposed screws shall be stainless steel with Ceramic primer-seal basecoat to reduce seizing of the parts. All seals and sealing devices are made and/or lined with EPDM and/or silicone.

Finish: Color to be **blue green textured (GN4TX)** and in accordance with the AAMA 2603 standard. Application of a polyester power coat paint (3 mils/76 microns) minimum. The Thermosetting resins provides a discoloration resistant finish in accordance with the ASTM D 2244 standard, as well as luster retention in keeping with the ASTM D 523 standard and humidity proof in accordance with the ASTM-D2247 standard.

The surface treatment achieves a minimum of 2000 hours for salt spray resistant finish in accordance with the tests performed and the ASTM-B117 standard.

Note: ***IMPORTANT: All missing details must be clearly specified on the return of these approval drawings. Thank you for your cooperation.***

VOLTAGE:_____

Quality Control: The manufacturer must provide a written confirmation of its ISO 9001-2008 and ISO 14001-2004 International Quality Standards Certification.

Vibration Resistance: The DMS50 meets the **ANSI C136.31-2001** table 2, American National Standard for Roadway Luminaire Vibration specifications for Bridge/overpass applications. (Tested for 3G over 100 000 cycles by an independent lab)

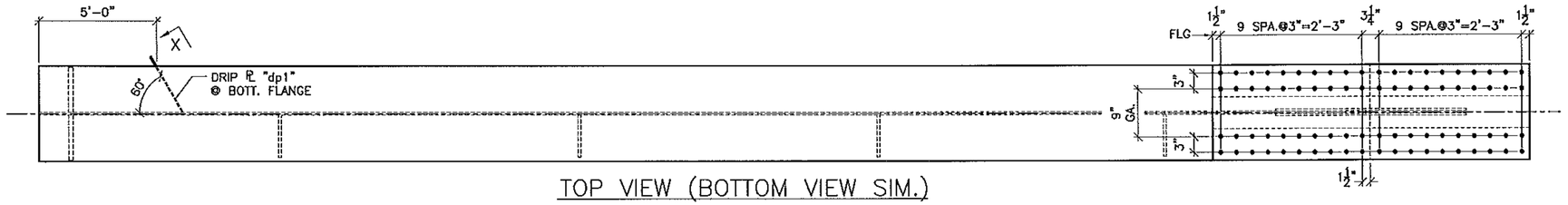
Mechanical resistance: In order to ensure the mechanical resistance of the poles, the projected area should be calculated according to AASHTO 2001.

Web site information details: Click on any specific information details you need:

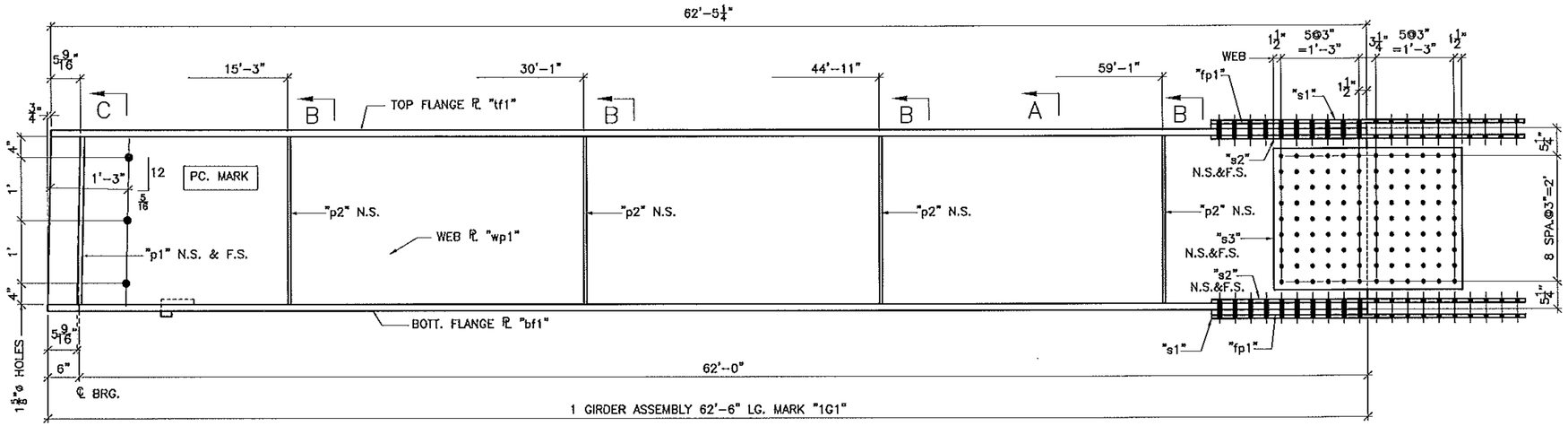
Paint finish / Warranties / Installation pictures / ISO 9001-2008 Certification / ISO 14001-2004 Certification

Vermont Agency of Transportation
RECEIVED
CK'D BY D. PETERSON **OK'D BY** C. CARLSON
08/20/2012
RESUBMIT _____ **APPROVED** X _____
BY C. CARLSON **DATE** 12/14/2012

PHILIPS
LUMEC
640, Curé-Boivin
Boisbriand (Québec)
Canada, J7G 2A7



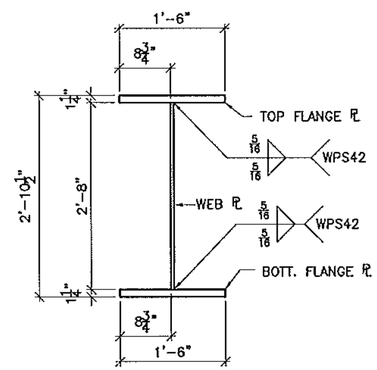
TOP VIEW (BOTTOM VIEW SIM.)



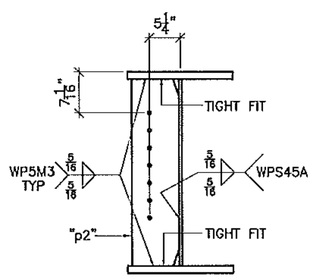
BILL OF MATERIAL

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	REMARKS	WT.	
1	1G1			BRIDGE GIRDER				
		1	wp1	℄ ⅜X32	62'-6		3403	
		1	tf1	℄ 1½X18	62'-5¼		4786	
		1	bf1	℄ 1½X18	62'-6		4788	
		2	p1	SEE SHT. 26				
		4	p2	SEE SHT. 26				
		2	s1	SEE SHT. 26				
		4	s2	SEE SHT. 26				
		2	s3	SEE SHT. 26				
		2	fp1	SEE SHT. 26				

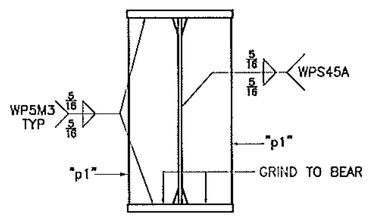
GIRDER WT: 14,997



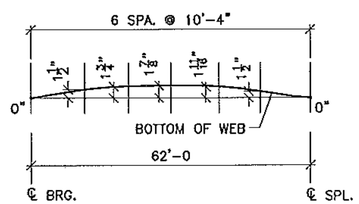
SECTION A
(GIRDER ASS'Y)



SECTION B



SECTION C



CAMBER DIAGRAM

Vermont Agency of Transportation

RECEIVED

CK'D BY GFR OK'D BY

05/15/2012

RESUBMIT APPROVED X

BY C. CARLSON DATE 05/16/2012

SEE .dxf FILES FOR WEB ℄ CUTTING

SEE SHEET 26 FOR PIECE DETAILS

SEE SHEET B1 FOR NOTES

FINISH				
MATERIAL AASHTO M270 (ASTM A709) GRADE 50				
HOLES 15/16"ø U.O.N.				
ELECTRODES				
WELDS PER WPS				
SURFACE PREP	1	5/15/12	PER APPROVAL	JAC
	NO	DATE	DESCRIPTION	BY
	REVISIONS			

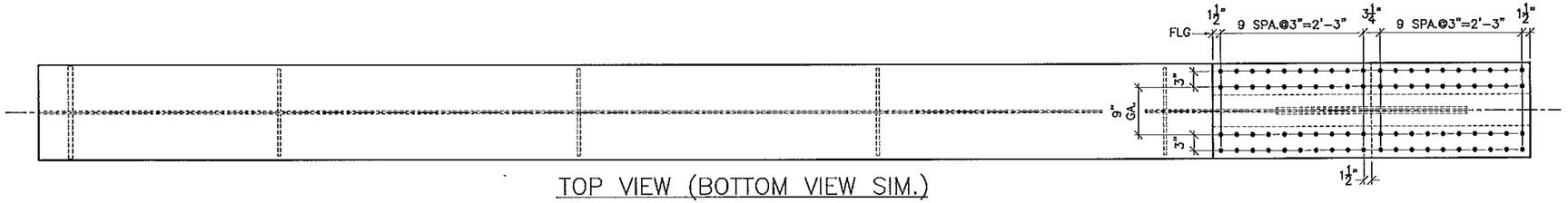
ARC ENTERPRISES, INC.

ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2646 - FAX: (207) 265-4054

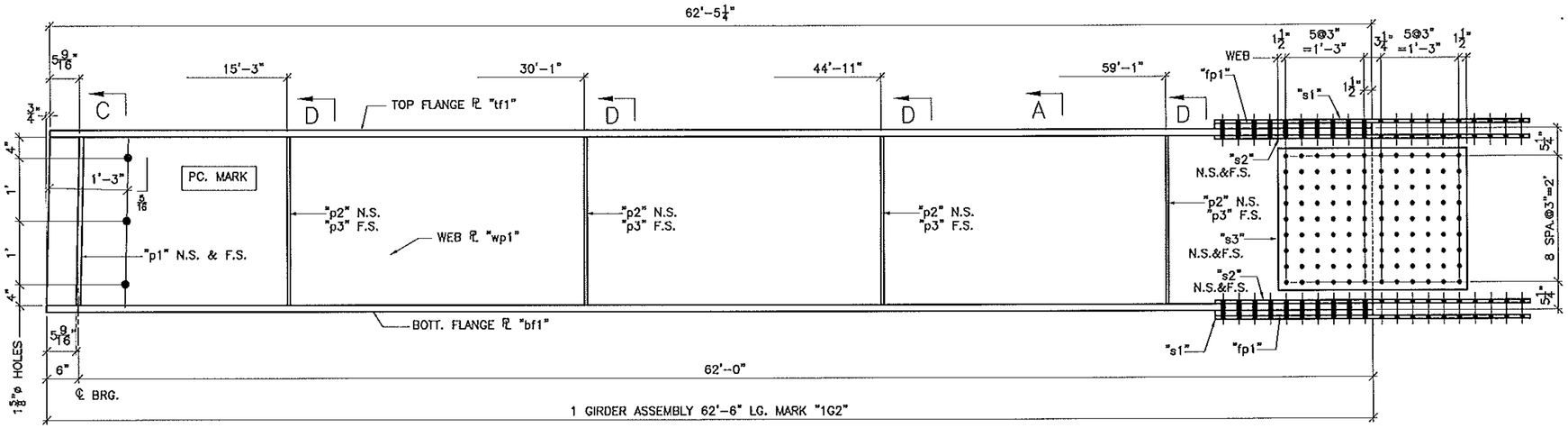
DRAFTER JAC	STRINGER DETAILS	CONTRACT NO. BRO 1449 (25)
DATE 4/11/12	VERMONT AGENCY OF TRANSPORTATION, NEWPORT CITY, CO. OF ORLEANS RAILROAD SQUARE, TH11 (CLASS 2) MAJOR COLLECTOR, BRIDGE NO. 9	
CHECKED JS	G.C. REED & REED	DWG. NO. 1
JOB # 12-100		

J:\A.C. DRAFTING\CS1B12\D1

PDF created with FinePrint pdfFactory trial version http://www.pdffactory.com



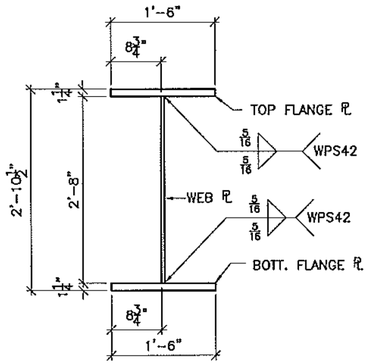
TOP VIEW (BOTTOM VIEW SIM.)



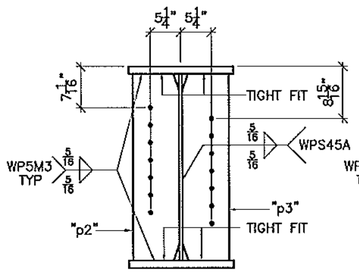
BILL OF MATERIAL

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	REMARKS	WT.
1	1G2			BRIDGE GIRDER			
		1	wp1	℄ ½X32	62'-6		3403
		1	tf1	℄ 1½X18	62'-5¼		4786
		1	bf1	℄ 1½X18	62'-6		4788
		2	p1	SEE SHT. 26			
		4	p2	SEE SHT. 26			
		4	p3	SEE SHT. 26			
		2	s1	SEE SHT. 26			
		4	s2	SEE SHT. 26			
		2	s3	SEE SHT. 26			
		2	fp1	SEE SHT. 26			

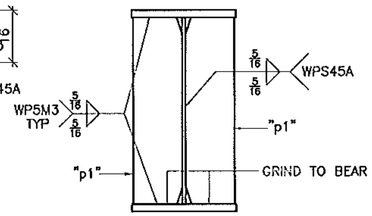
GIRDER WT: 15,141



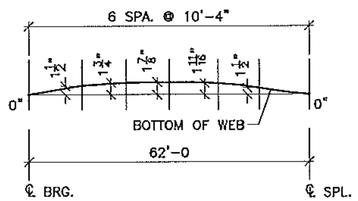
SECTION A
(GIRDER ASS'Y)



SECTION D



SECTION C



CAMBER DIAGRAM

Vermont Agency of Transportation

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CK'D BY GFR OK'D BY

05/15/2012

RESUBMIT APPROVED X

BY C. CARLSON DATE 05/16/2012

SEE .dxf FILES FOR WEB ℄ CUTTING

SEE SHEET 26 FOR PIECE DETAILS

SEE SHEET B1 FOR NOTES

FINISH				
MATERIAL AASHTO M270 (ASTM A709) GRADE 50				
HOLES 15/16"ø U.O.N.				
ELECTRODES				
WELDS PER WPS				
SURFACE PREP	1	5/15/12	PER APPROVAL	JAC
	NO	DATE	DESCRIPTION	BY
	REVISIONS			

ARC ENTERPRISES, INC.

ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2646 - FAX: (207) 265-4054

DRAFTER JAC	STRINGER DETAILS	CONTRACT NO.	
DATE 4/11/12	VERMONT AGENCY OF TRANSPORTATION, NEWPORT CITY, CO. OF ORLEANS RAILROAD SQUARE, BH1 (CLASS 2) MAJOR COLLECTOR, BRIDGE NO. 9	BRO 1449 (25)	
CHECKED JS	G.C. REED & REED	DWG. NO.	
JOB # 12-100		2	

J:\A.C. DRAFTING\STR\912\02

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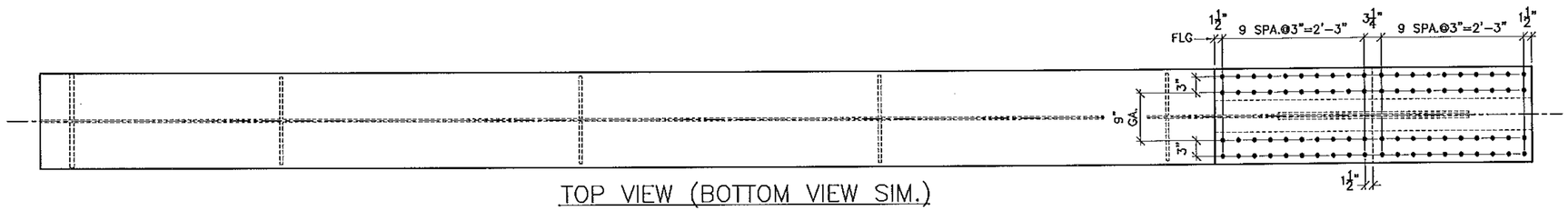
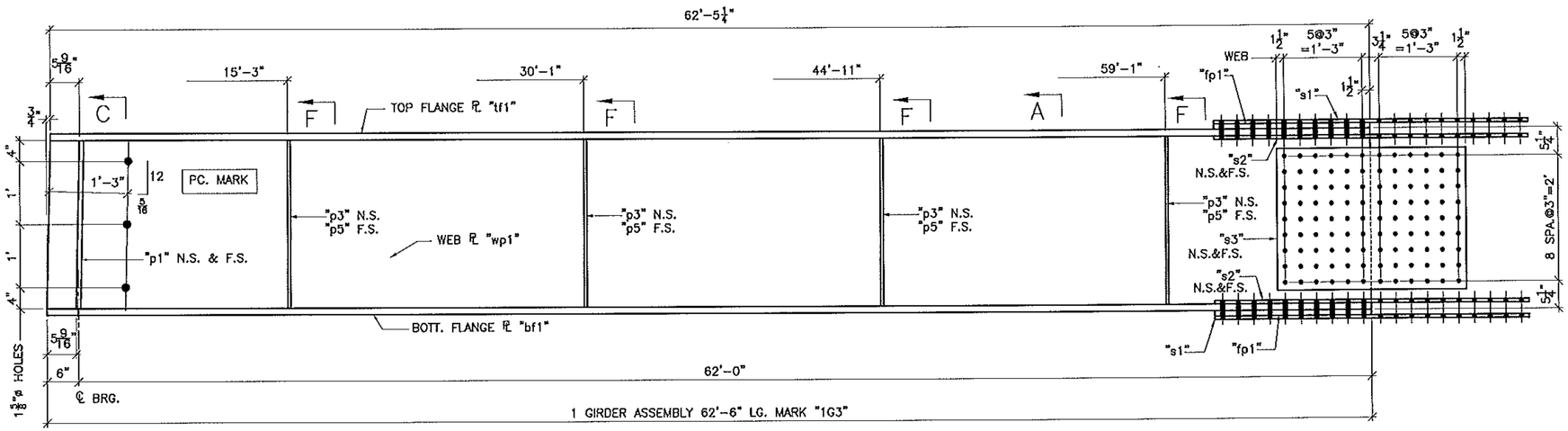


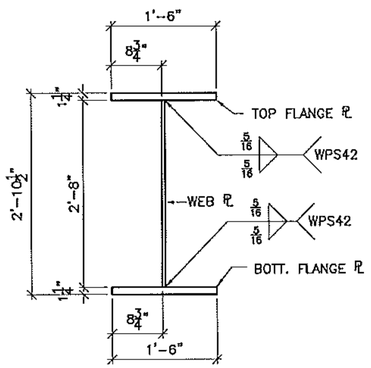
TOP VIEW (BOTTOM VIEW SIM.)



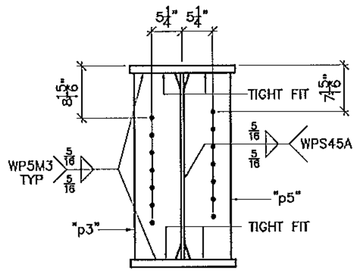
BILL OF MATERIAL

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	REMARKS	WT.
1	1G3			BRIDGE GIRDER			
		1	wp1	℄ ½X32	62'-6		3403
		1	tf1	℄ 1½X18	62'-5¼		4788
		1	bf1	℄ 1½X18	62'-6		4788
		2	p1	SEE SHT. 26			
		4	p3	SEE SHT. 26			
		4	p5	SEE SHT. 26			
		2	s1	SEE SHT. 26			
		4	s2	SEE SHT. 26			
		2	s3	SEE SHT. 26			
		2	fp1	SEE SHT. 26			

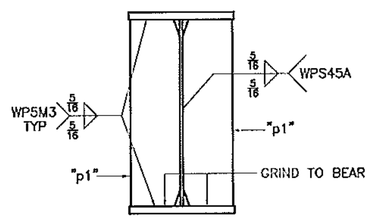
GIRDER WT: 15,147



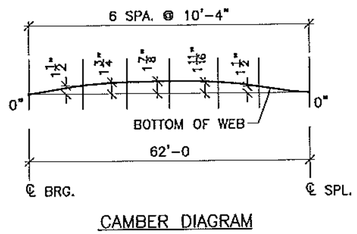
SECTION A
(GIRDER ASS'Y)



SECTION F



SECTION C



CAMBER DIAGRAM

Vermont Agency of Transportation

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CK'D BY GFR OK'D BY _____

05/15/2012

RESUBMIT _____ APPROVED X

BY C. CARLSON DATE 05/16/2012

SEE .dxf FILES FOR WEB ℄ CUTTING

SEE SHEET 26 FOR PIECE DETAILS

SEE SHEET B1 FOR NOTES

FINISH				
MATERIAL AASHTO M270 (ASTM A709) GRADE 50				
HOLES 15/16"ø U.O.N.				
ELECTRODES				
WELDS PER WPS				
SURFACE PREP	1	5/15/12	PER APPROVAL	JAC
	NO	DATE	DESCRIPTION	BY
	REVISIONS			

ARC ENTERPRISES, INC.

ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2648 – FAX: (207) 265-4054

DRAFTER	JAC	STRINGER DETAILS	CONTRACT NO. BRO 1449 (25)
DATE	4/11/12	VERMONT AGENCY OF TRANSPORATION, NEWPORT CITY, CO. OF ORLEANS RAILROAD SQUARE, TH11 (CLASS 2) MAJOR COLLECTOR, BRIDGE NO. 9	DWG. NO. 3
CHECKED	JS	G.C. REED & REED	
JOB #	12-100		

JAC DRAFTING/5/15/12/03

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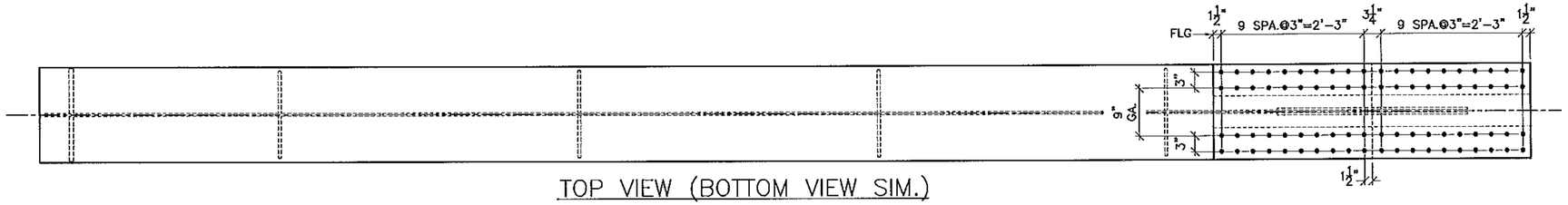
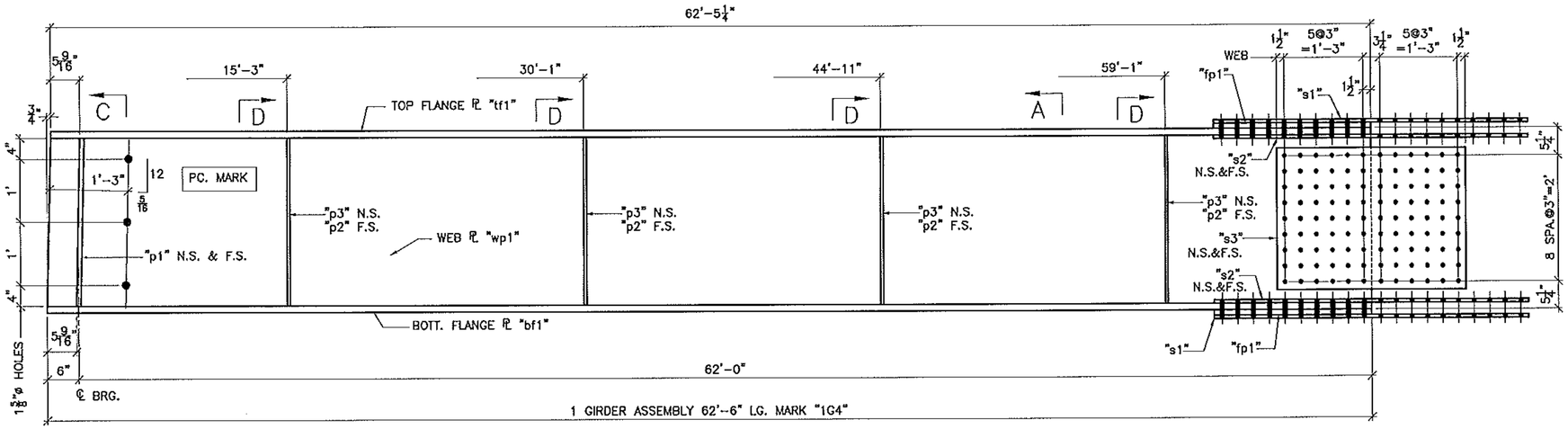


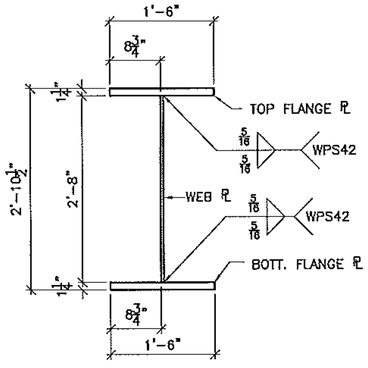
TOP VIEW (BOTTOM VIEW SIM.)



BILL OF MATERIAL

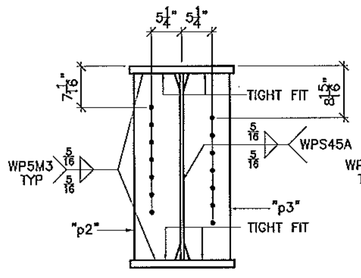
SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	REMARKS	WT.	
1	1G4			BRIDGE GIRDER				
		1	wp1	℄ ½X32	62'-6		3403	
		1	tf1	℄ 1½X18	62'-5¼		4788	
		1	bf1	℄ 1½X18	62'-6		4788	
		2	p1	SEE SHT. 26				
		4	p2	SEE SHT. 26				
		4	p3	SEE SHT. 26				
		2	s1	SEE SHT. 26				
		4	s2	SEE SHT. 26				
		2	s3	SEE SHT. 26				
		2	fp1	SEE SHT. 26				

GIRDER WT: 15,147

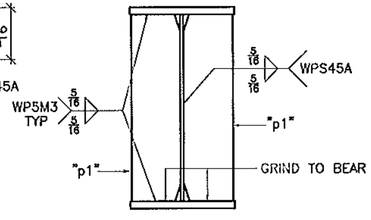


SECTION A

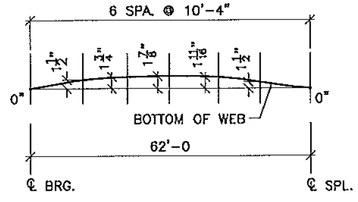
(GIRDER ASS'Y)



SECTION D



SECTION C



CAMBER DIAGRAM

Vermont Agency of Transportation

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CK'D BY GFR OK'D BY

05/15/2012

RESUBMIT APPROVED X

BY C. CARLSON DATE 05/16/2012

SEE .dxf FILES FOR WEB ℄ CUTTING

SEE SHEET 26 FOR PIECE DETAILS

SEE SHEET B1 FOR NOTES

FINISH				
MATERIAL AASHTO M270 (ASTM A709) GRADE 50				
HOLES 15/16"ø U.O.N.				
ELECTRODES				
WELDS PER WPS				
SURFACE PREP	1	5/15/12	PER APPROVAL	JAC
	NO	DATE	DESCRIPTION	BY
	REVISIONS			

ARC ENTERPRISES, INC.

ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED

P.O. BOX 120 KINGFIELD, ME. 04947

PHONE: (207) 265-2646 – FAX: (207) 265-4054

DRAFTER	JAC	STRINGER DETAILS	CONTRACT NO.
DATE	4/11/12	VERMONT AGENCY OF TRANSPORATION, NEWPORT CITY, CO. OF ORLEANS RAILROAD SQUARE, TH1 (CLASS 2) MAJOR COLLECTOR, BRIDGE NO. 9	BRO 1449 (25)
CHECKED	JS		DWG. NO.
JOB #	12-100	G.C. REED & REED	4

J.A.C. DRAFTING/5/15/12/D4

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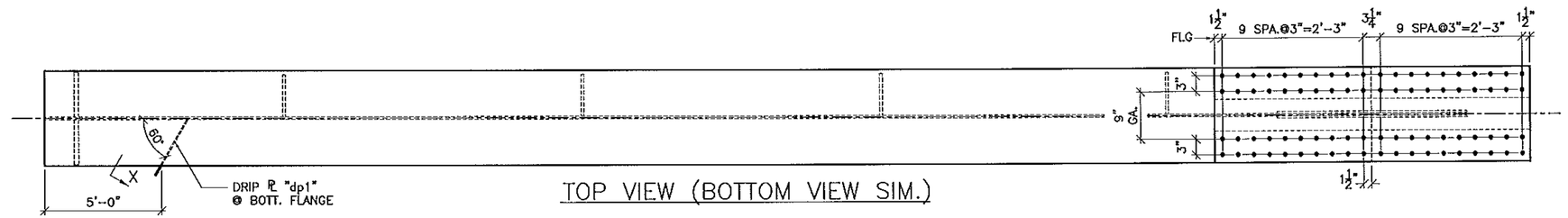
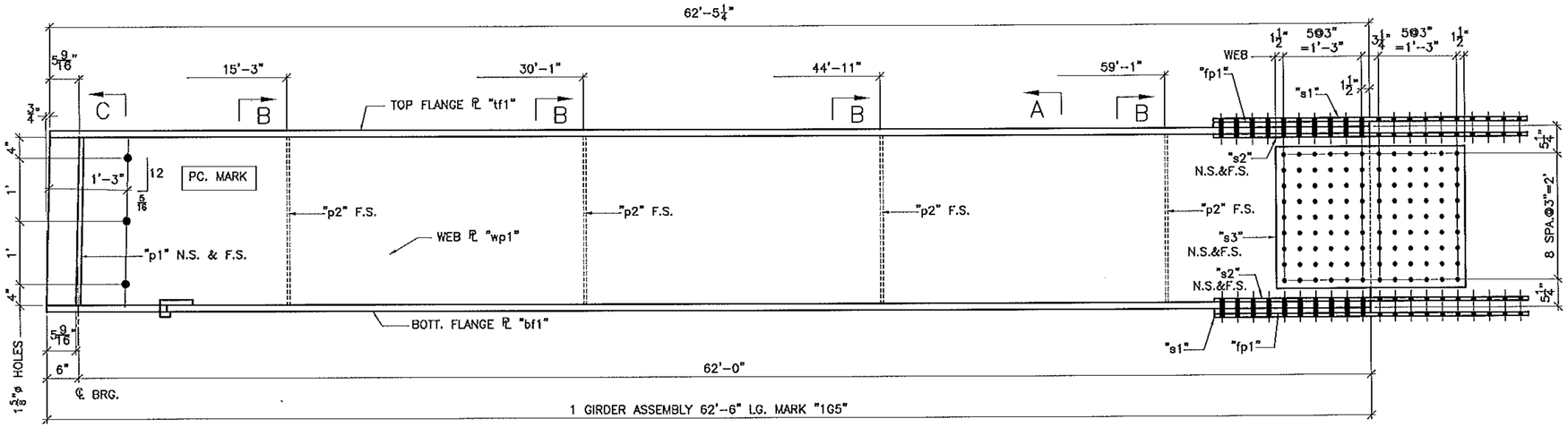


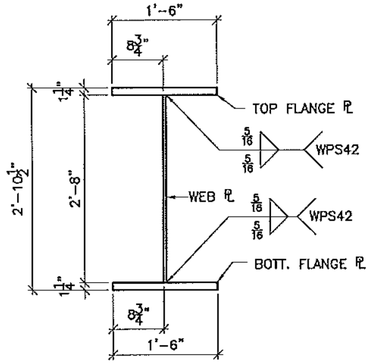
TOP VIEW (BOTTOM VIEW SIM.)



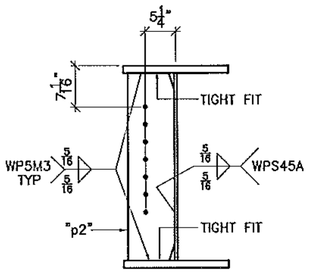
BILL OF MATERIAL

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	REMARKS	WT.	
1	1G5			BRIDGE GIRDER				
		1	wp1	℄ ½X32	62'-6		3403	
		1	tf1	℄ 1½X18	62'-5¼		4786	
		1	bf1	℄ 1½X18	62'-6		4786	
		2	p1	SEE SHT. 26				
		4	p2	SEE SHT. 26				
		2	S1	SEE SHT. 26				
		4	S2	SEE SHT. 26				
		2	S3	SEE SHT. 26				
		2	fp1	SEE SHT. 26				

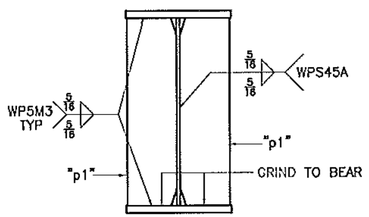
GIRDER WT: 14,997



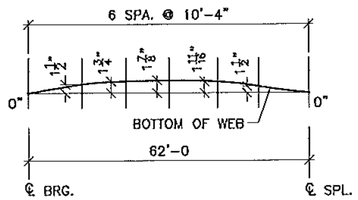
SECTION A
(GIRDER ASS'Y)



SECTION B



SECTION C



CAMBER DIAGRAM

Vermont Agency of Transportation

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05/15/2012

RESUBMIT APPROVED X

BY C. CARLSON DATE 05/16/2012

SEE .dxf FILES FOR WEB ℄ CUTTING

SEE SHEET 26 FOR PIECE DETAILS

SEE SHEET B1 FOR NOTES

FINISH				
MATERIAL AASHTO M270 (ASTM A709) GRADE 50				
HOLES 15/16"ø U.O.N.				
ELECTRODES				
WELDS PER WPS				
SURFACE PREP	1	5/15/12	PER APPROVAL	JAC
	NO	DATE	DESCRIPTION	BY
	REVISIONS			

ARC ENTERPRISES, INC.

ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2648 – FAX: (207) 265-4054

DRAFTER JAC	STRINGER DETAILS		CONTRACT NO. BRO 1449 (25)
DATE 4/11/12	VERMONT AGENCY OF TRANSPORTATION, NEWPORT CITY, CO. OF ORLEANS RAILROAD SQUARE, RTE (CLASS 2) MAJOR COLLECTOR, BRIDGE NO. 9		
CHECKED JS	O.C. REED & REED		DWG. NO. 5
JOB # 12-100			

J.A.C. DRAWING/S15512/05

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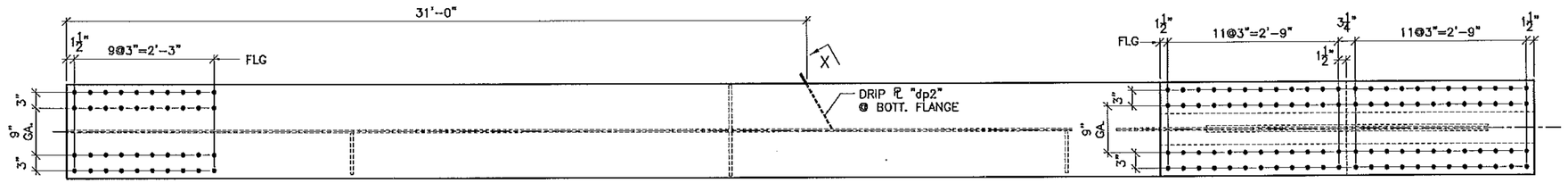
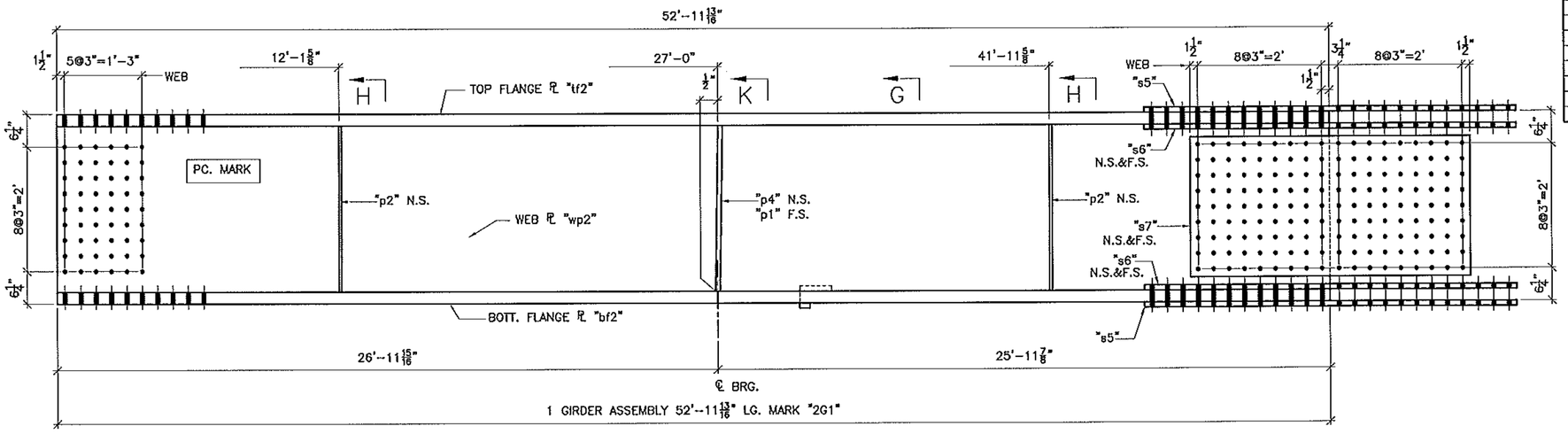


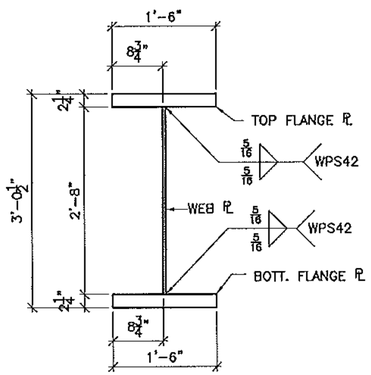
TOP VIEW (BOTTOM VIEW SIM.)



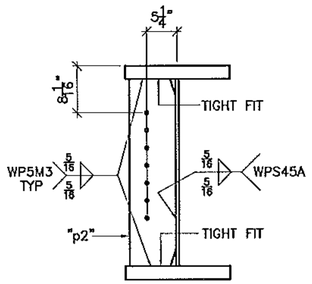
BILL OF MATERIAL

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	REMARKS	WT.	
1	2G1			BRIDGE GIRDER				
		1	wp2	℄ ½X32	52'-11 13/16"		2888	
		1	tf2	℄ 2¼X18	52'-11 13/16"		7305	
		1	bf2	℄ 2¼X18	52'-11 13/16"		7305	
		1	p1	SEE SHT. 26				
		2	p2	SEE SHT. 26				
		1	p4	SEE SHT. 26				
		2	S5	SEE SHT. 26				
		4	S6	SEE SHT. 26				
		2	S7	SEE SHT. 26				

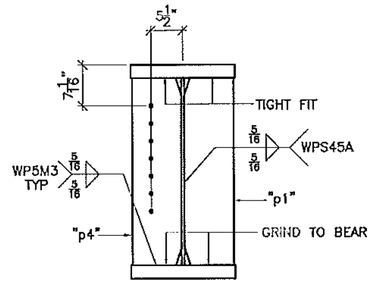
GIRDER WT: 19,242



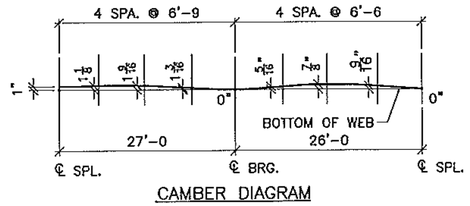
SECTION G
(GIRDER ASS'Y)



SECTION H



SECTION K



CAMBER DIAGRAM

Vermont Agency of Transportation

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CK'D BY GFR OK'D BY _____

05/15/2012

RESUBMIT _____ APPROVED X

BY C. CARLSON DATE 05/16/2012

SEE .dxf FILES FOR WEB ℄ CUTTING

SEE SHEET 26 FOR PIECE DETAILS

SEE SHEET B1 FOR NOTES

FINISH				
MATERIAL AASHTO M270 (ASTM A709) GRADE 50				
HOLES 15/16"ø U.O.N.				
ELECTRODES				
WELDS PER WPS				
SURFACE PREP	1	5/15/12	PER APPROVAL	JAC
	NO	DATE	DESCRIPTION	BY
	REVISIONS			

ARC ENTERPRISES, INC.

ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2648 – FAX: (207) 265-4054

DRAFTER JAC	STRINGER DETAILS		CONTRACT NO. BRO 1449 (25)
DATE 4/11/12	VERMONT AGENCY OF TRANSPORTATION, NEWPORT CITY, CO. OF ORLEANS RAILROAD SQUARE, TH11 (CLASS 2) MAJOR COLLECTOR, BRIDGE NO. 8		
CHECKED JS			DWG. NO.
JOB # 12-100	C.C. REED & REED		6

J:\A.C. DRAFTING\S15B12\D6

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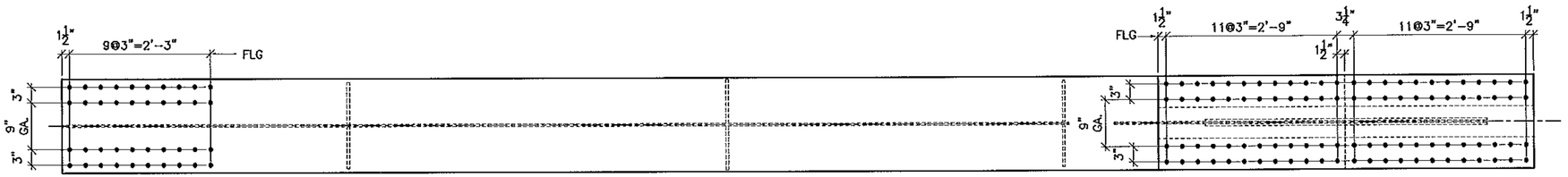
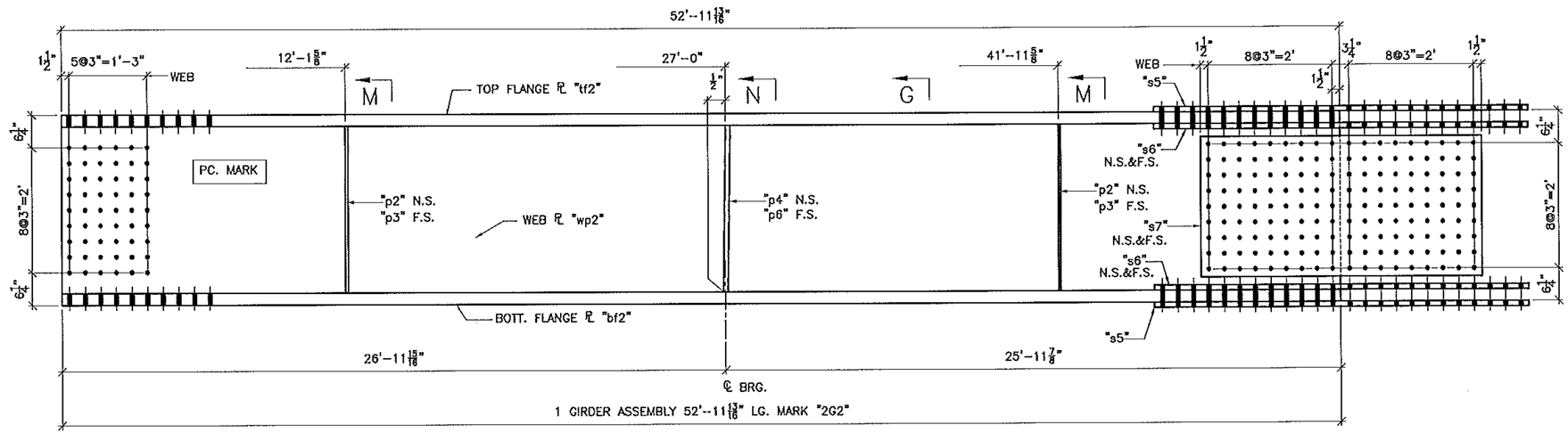


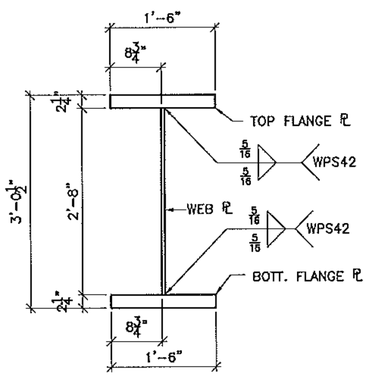
TOP VIEW (BOTTOM VIEW SIM.)



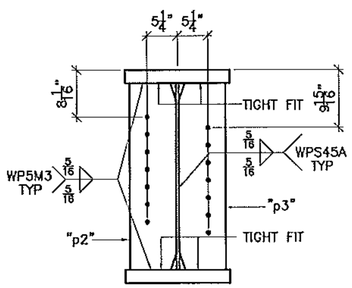
BILL OF MATERIAL

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	REMARKS	WT.	
1	2G2			BRIDGE GIRDER				
		1	wp2	℄ ½X32	52'-11 13/16"		2886	
		1	tf2	℄ 2¼X18	52'-11 13/16"		7305	
		1	bf2	℄ 2¼X18	52'-11 13/16"		7305	
		1	p8	SEE SHT. 26				
		2	p2	SEE SHT. 26				
		1	p4	SEE SHT. 26				
		2	p3	SEE SHT. 26				
		2	S5	SEE SHT. 26				
		4	S6	SEE SHT. 26				
		2	S7	SEE SHT. 26				

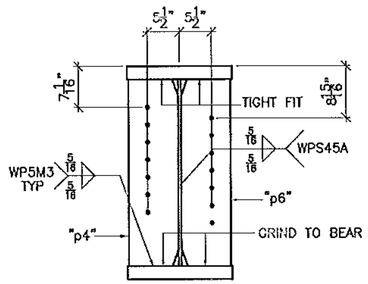
GIRDER WT: 19,314



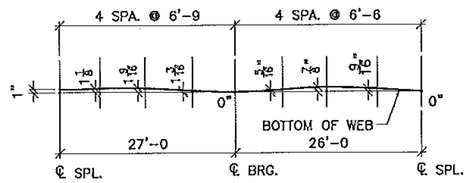
SECTION G
(GIRDER ASS'Y)



SECTION M



SECTION N



CAMBER DIAGRAM

Vermont Agency of Transportation

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05/15/2012

RESUBMIT APPROVED X

BY C. CARLSON DATE 05/16/2012

SEE .dxf FILES FOR WEB ℄ CUTTING

SEE SHEET 26 FOR PIECE DETAILS

SEE SHEET B1 FOR NOTES

FINISH				
MATERIAL AASHTO M270 (ASTM A709) GRADE 50				
HOLES 15/16"ø U.O.N.				
ELECTRODES				
WELDS PER WPS				
SURFACE PREP	1	5/15/12	PER APPROVAL	JAC
	NO	DATE	DESCRIPTION	BY
	REVISIONS			

ARC ENTERPRISES, INC.

ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2648 – FAX: (207) 265-4054

DRAFTER	JAC	STRINGER DETAILS	CONTRACT NO. BRO 1449 (25)
DATE	4/11/12	VERMONT AGENCY OF TRANSPORTATION, NEWPORT CITY, CO. OF ORLEANS RAILROAD SQUARE, TH1 (CLASS 2) MAJOR COLLECTOR, BRIDGE NO. 9	DWG. NO. 7
CHECKED	JS	C.C. REED & REED	
JOB #	12-100		

J.A.C. DRAFTING/5/15/12/07

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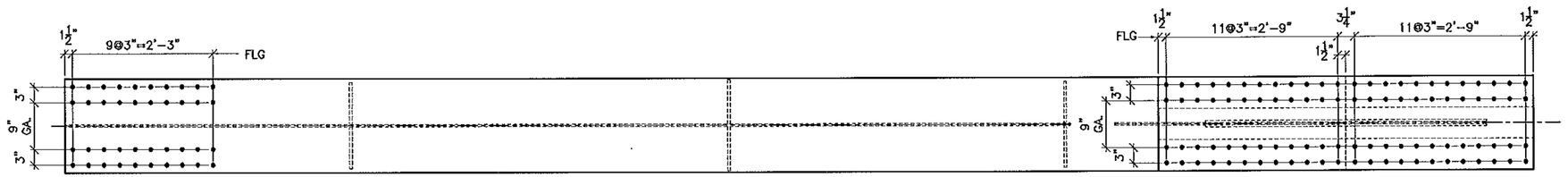
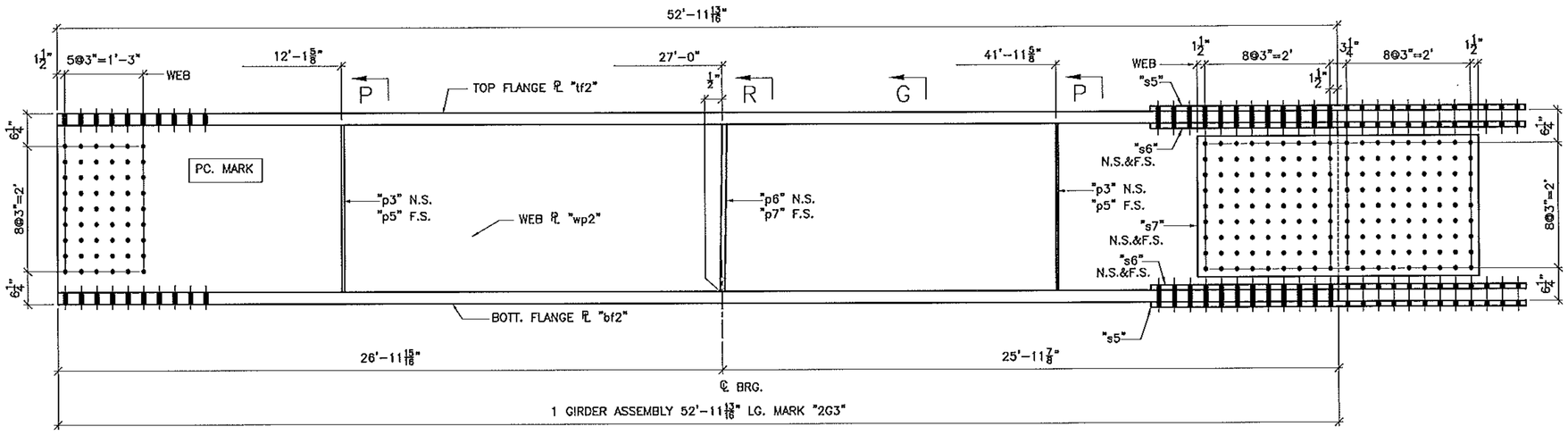


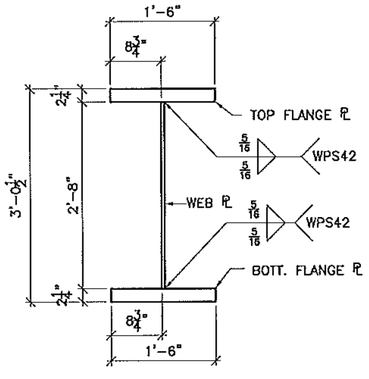
TOP VIEW (BOTTOM VIEW SIM.)



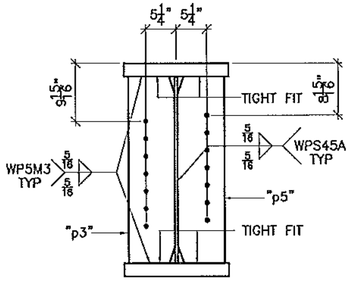
BILL OF MATERIAL

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	REMARKS	WT.	
1	2G3			BRIDGE GIRDER				
		1	wp2	℄ ½X32	52'-11 13/16"		2656	
		1	tf2	℄ 2½X18	52'-11 13/16"		7305	
		1	bf2	℄ 2½X18	52'-11 13/16"		7305	
		1	p6	SEE SHT. 26				
		2	p3	SEE SHT. 26				
		1	p7	SEE SHT. 26				
		2	p5	SEE SHT. 26				
		2	S5	SEE SHT. 26				
		4	S6	SEE SHT. 26				
		2	S7	SEE SHT. 26				

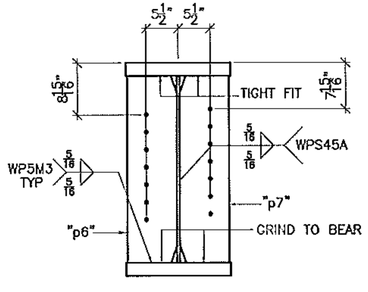
GIRDER WT: 19,314



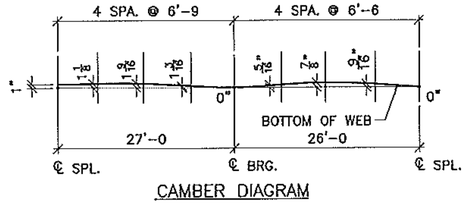
SECTION G
(GIRDER ASS'Y)



SECTION P



SECTION R



CAMBER DIAGRAM

Vermont Agency of Transportation

RECEIVED

CK'D BY GFR OK'D BY _____

05/15/2012

RESUBMIT _____ APPROVED X

BY C. CARLSON DATE 05/16/2012

SEE .dxf FILES FOR WEB ℄ CUTTING

SEE SHEET 26 FOR PIECE DETAILS

SEE SHEET B1 FOR NOTES

FINISH				
MATERIAL AASHTO M270 (ASTM A709) GRADE 50				
HOLES 15/16"ø U.O.N.				
ELECTRODES				
WELDS PER WPS				
SURFACE PREP	1	5/15/12	PER APPROVAL	JAC
	NO	DATE	DESCRIPTION	BY
	REVISIONS			

ARC ENTERPRISES, INC.

ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGSFIELD, ME. 04947
PHONE: (207) 265-2646 - FAX: (207) 265-4054

DRAFTER	JAC	STRINGER DETAILS	CONTRACT NO. BRO 1449 (25)
DATE	4/11/12	VERMONT AGENCY OF TRANSPORTATION, NEWPORT CITY, CO. OF ORLEANS RAILROAD SQUARE, 1911 (CLASS 2) MAJOR COLLECTOR, BRIDGE NO. 9	DWG. NO. 8
CHECKED	JS	G.C. REED & REED	
JOB #	12-100		

J.A.C. DRAFTING/5/15/12/DS

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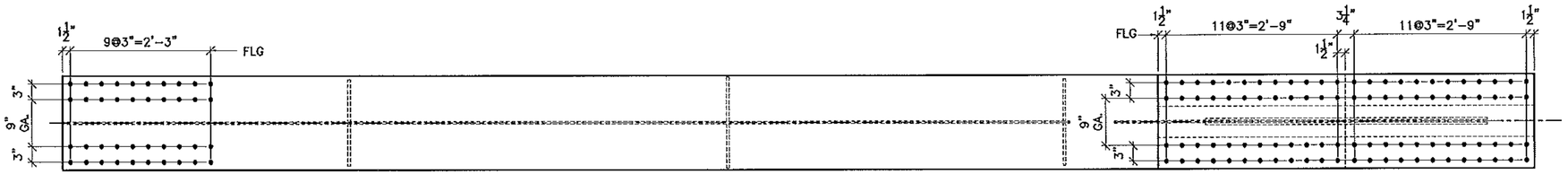
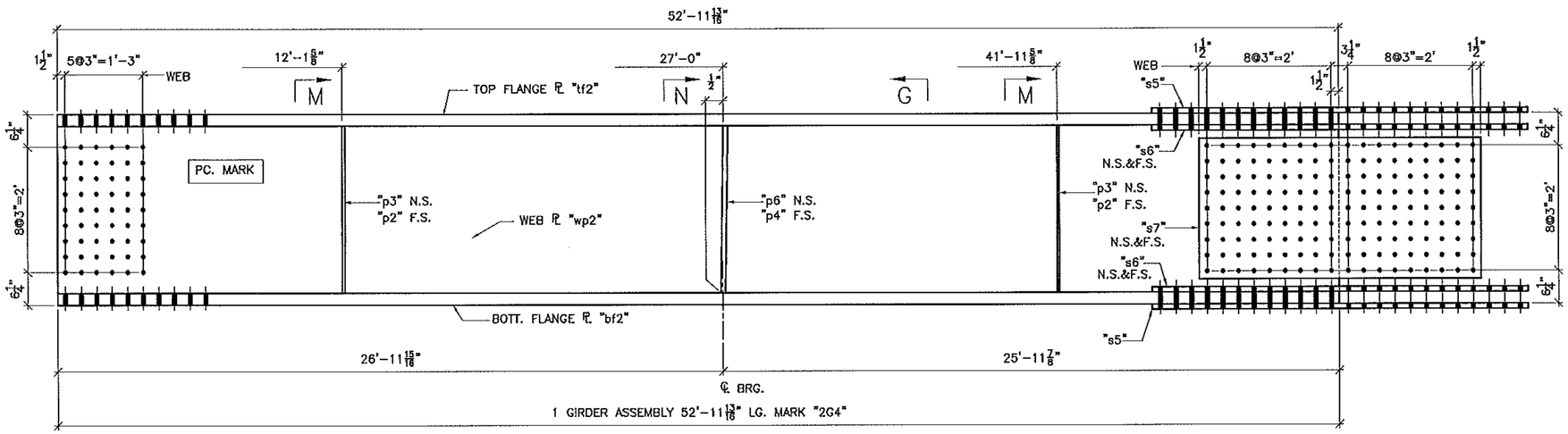


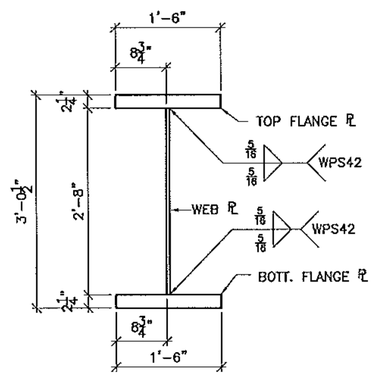
TOP VIEW (BOTTOM VIEW SIM.)



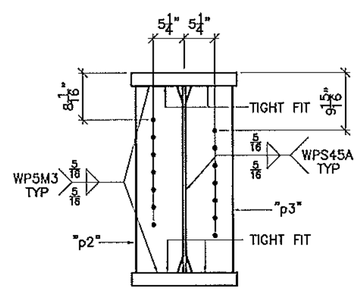
BILL OF MATERIAL

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	REMARKS	WT.	
1	2G4			BRIDGE GIRDER				
		1	wp2	℄ ½X32	52'-11 13/16"		2886	
		1	tf2	℄ 2½X18	52'-11 13/16"		7305	
		1	bf2	℄ 2½X18	52'-11 13/16"		7305	
		1	p6	SEE SHT. 26				
		2	p2	SEE SHT. 26				
		1	p4	SEE SHT. 26				
		2	p3	SEE SHT. 26				
		2	S5	SEE SHT. 26				
		4	S6	SEE SHT. 26				
		2	S7	SEE SHT. 26				

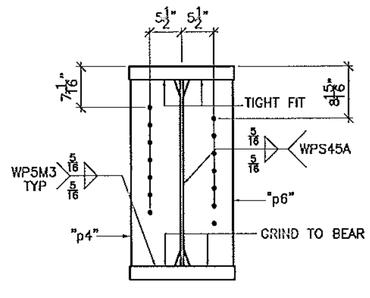
GIRDER WT: 19,314



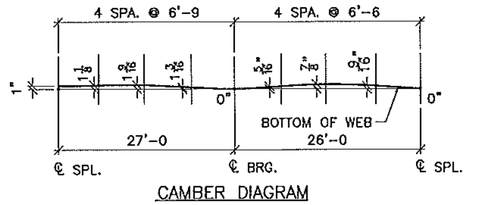
SECTION G
(GIRDER ASS'Y)



SECTION M



SECTION N



CAMBER DIAGRAM

Vermont Agency of Transportation

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05/15/2012

RESUBMIT APPROVED X

BY C. CARLSON DATE 05/16/2012

SEE .dxf FILES FOR WEB ℄ CUTTING

SEE SHEET 26 FOR PIECE DETAILS

SEE SHEET B1 FOR NOTES

FINISH				
MATERIAL AASHTO M270 (ASTM A709) GRADE 50				
HOLES 15/16"ø U.O.N.				
ELECTRODES				
WELDS PER WPS				
SURFACE PREP	1	5/15/12	PER APPROVAL	JAC
	NO	DATE	DESCRIPTION	BY
	REVISIONS			

ARC ENTERPRISES, INC.

ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2646 – FAX: (207) 265-4054

DRAFTER JAC	STRINGER DETAILS		CONTRACT NO.
DATE 4/11/12	VERMONT AGENCY OF TRANSPORTATION, NEWPORT CITY, CO. OF ORLEANS RAILROAD SQUARE, TM1 (CLASS 2) MAJOR COLLECTOR, BRIDGE NO. 8		BRO 1449 (25)
CHECKED JS	G.C. REED & REED		DWG. NO. 9
JOB # 12-100			

J.A.C. DRAFTING/5/15/12/09

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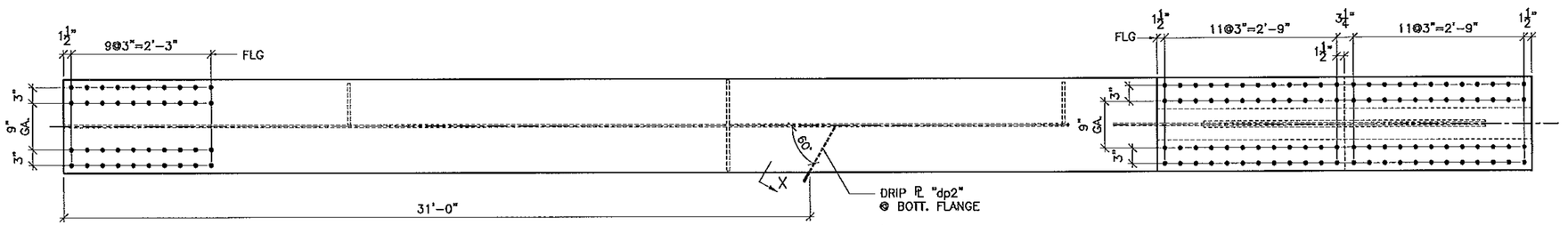
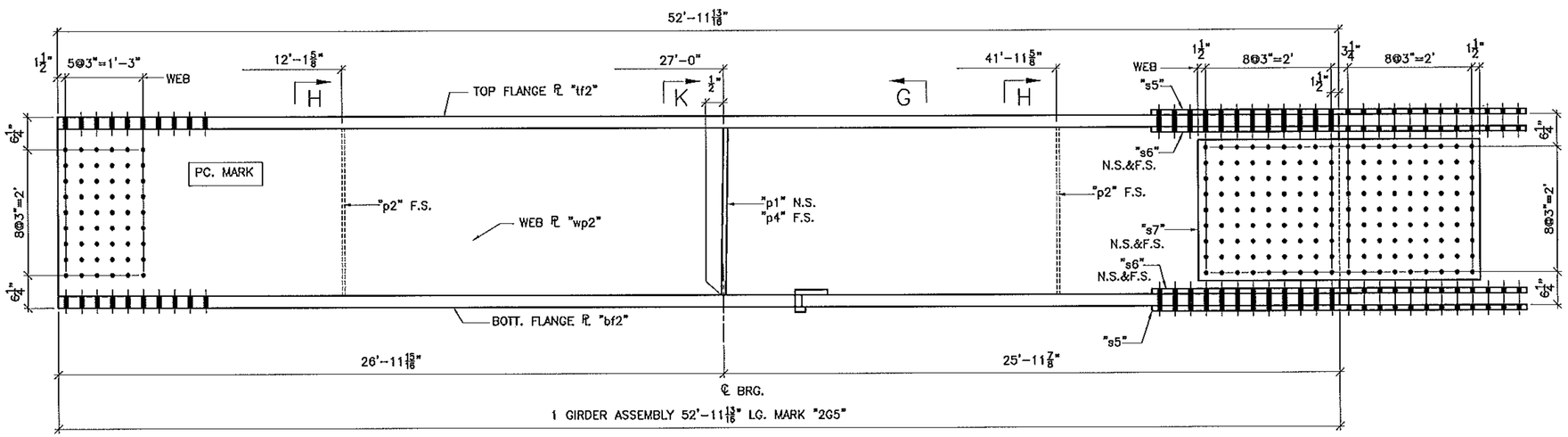


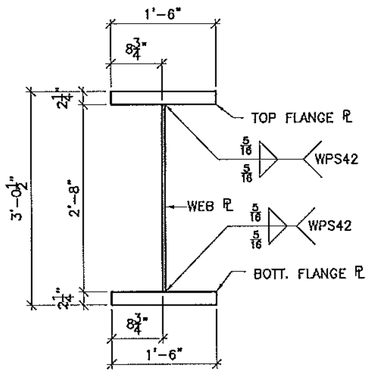
TOP VIEW (BOTTOM VIEW SIM.)



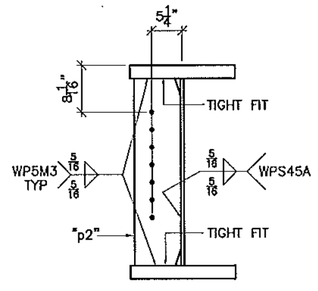
BILL OF MATERIAL

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	REMARKS	WT.
1	2G5			BRIDGE GIRDER			
		1	wp2	℄ ½X32	52'-11 13/16"		2888
		1	tf2	℄ 2¼X18	52'-11 13/16"		7305
		1	bf2	℄ 2¼X18	52'-11 13/16"		7305
		1	p1	SEE SHT. 26			
		2	p2	SEE SHT. 26			
		1	p4	SEE SHT. 26			
		2	S5	SEE SHT. 26			
		4	S6	SEE SHT. 26			
		2	S7	SEE SHT. 26			

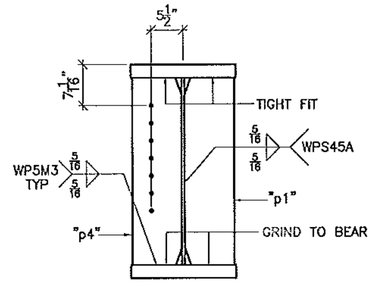
GIRDER WT: 19,242



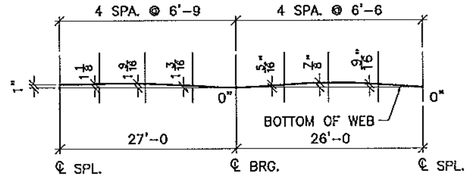
SECTION G
(GIRDER ASS'Y)



SECTION H



SECTION K



CAMBER DIAGRAM

Vermont Agency of Transportation

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RESUBMIT APPROVED X

BY C. CARLSON DATE 05/16/2012

SEE .dxf FILES FOR WEB ℄ CUTTING

SEE SHEET 26 FOR PIECE DETAILS

SEE SHEET B1 FOR NOTES

FINISH				
MATERIAL AASHTO M270 (ASTM A709) GRADE 50				
HOLES 15/16"ø U.O.N.				
ELECTRODES				
WELDS PER WPS				
SURFACE PREP	1	5/15/12	PER APPROVAL	JAC
	NO	DATE	DESCRIPTION	BY
	REVISIONS			

ARC ENTERPRISES, INC.

ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2648 – FAX: (207) 265-4054

DRAFTER JAC	STRINGER DETAILS		CONTRACT NO.
DATE 4/11/12	VERMONT AGENCY OF TRANSPORTATION, NEWPORT CITY, CO. OF ORLEANS RAILROAD SQUARE, RH11 (CLASS 2) MAJOR COLLECTOR, BRIDGE NO. 8		BRO 1449 (25)
CHECKED JS			DWG. NO.
JOB # 12-100	C.C. REED & REED		10

J:\AC DRAFTING\5\5812\010

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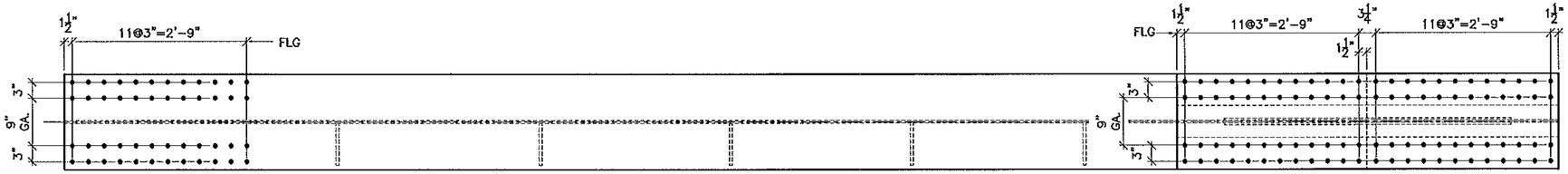
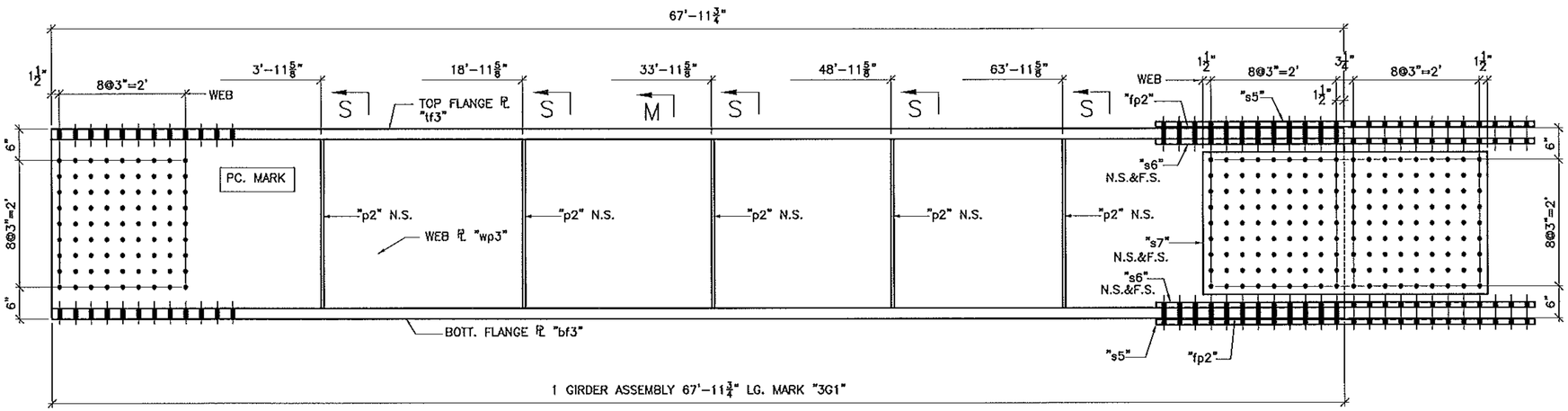


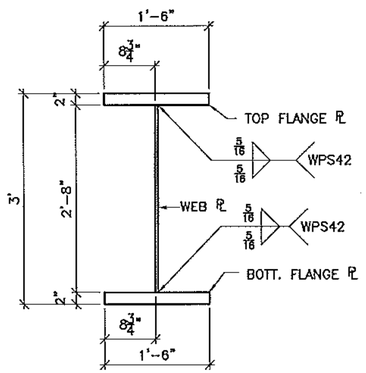
TOP VIEW (BOTTOM VIEW SIM.)



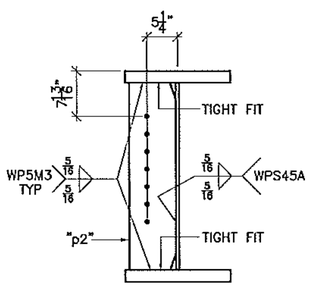
BILL OF MATERIAL

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	REMARKS	WT.	
1	3G1			BRIDGE GIRDER				
		1	wp3	PL ½X32	67'-11¾		3703	
		1	tf3	PL 2X18	67'-11¾		8331	
		1	bf3	PL 2X18	67'-11¾		8331	
		5	p2	SEE SHT. 26				
		2	S5	SEE SHT. 26				
		4	S6	SEE SHT. 26				
		2	S7	SEE SHT. 26				
		2	fp2	SEE SHT. 26				

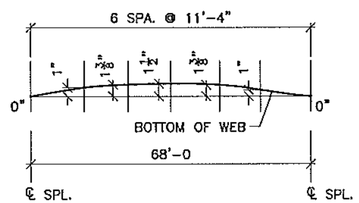
GIRDER WT: 22,177



SECTION M
(GIRDER ASS'Y)



SECTION S



CAMBER DIAGRAM

Vermont Agency of Transportation

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05/15/2012

RESUBMIT APPROVED X

BY C. CARLSON DATE 05/16/2012

SEE .dxf FILES FOR WEB PL CUTTING

SEE SHEET 26 FOR PIECE DETAILS

SEE SHEET B1 FOR NOTES

FINISH				
MATERIAL AASHTO M270 (ASTM A709) GRADE 50				
HOLES 15/16"ø U.O.N.				
ELECTRODES				
WELDS PER WPS				
SURFACE PREP				
	NO	DATE	DESCRIPTION	BY
	REVISIONS			

ARC ENTERPRISES, INC.

ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2648 – FAX: (207) 265-4054

DRAFTER	JAC	STRINGER DETAILS	CONTRACT NO. BRO 1449 (25)
DATE	4/11/12	VERMONT AGENCY OF TRANSPORTATION, NEWPORT CITY, CO. OF ORLEANS RAILROAD SQUARE, TH1 (CLASS 2) MAJOR COLLECTOR, BRIDGE NO. 9	DWG. NO. 11
CHECKED	JS	G.C. REED & REED	
JOB #	12-100		

J:\A.C. DRAFTING\S12\12\011

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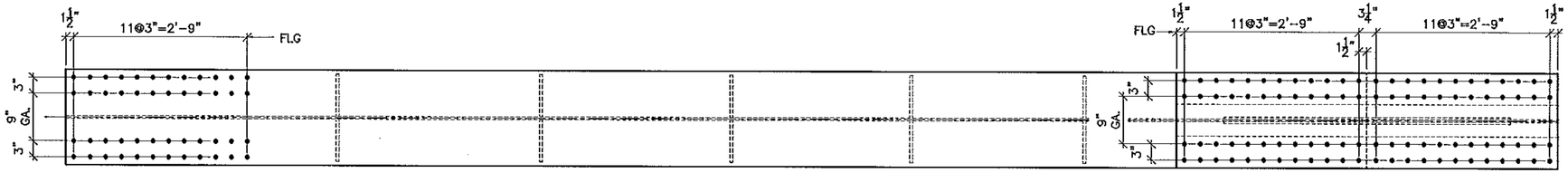
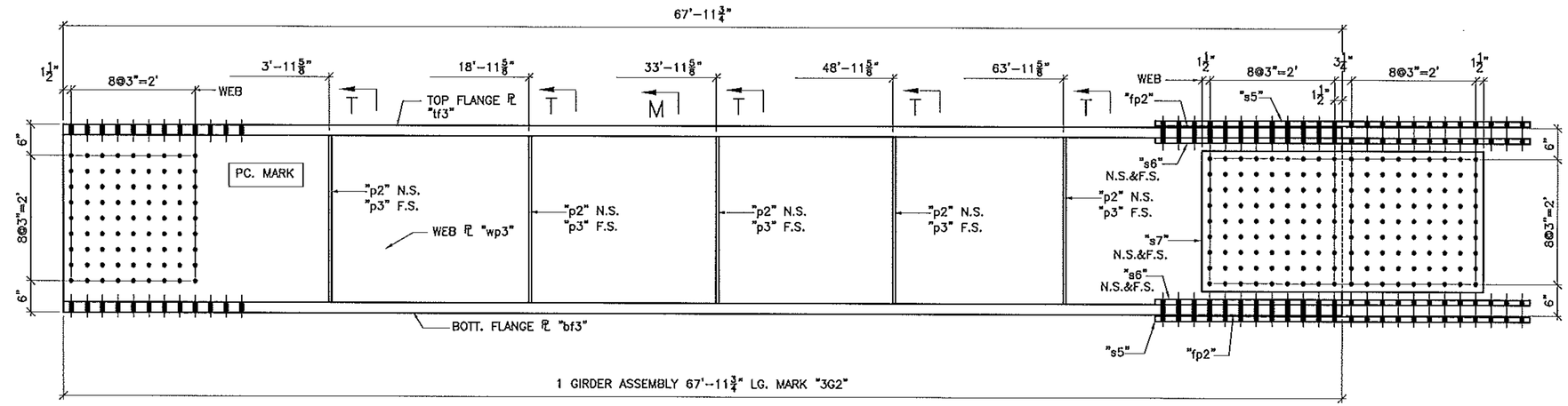


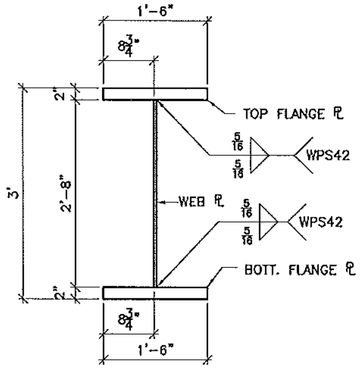
TOP VIEW (BOTTOM VIEW SIM.)



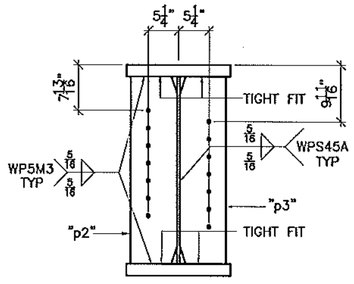
BILL OF MATERIAL

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	REMARKS	WT.	
1	3G2			BRIDGE GIRDER				
		1	wp3	℄ ½X32	67'-11¾		3703	
		1	tf3	℄ 2X18	67'-11¾		8331	
		1	bf3	℄ 2X18	67'-11¾		8331	
		5	p2	SEE SHT. 26				
		5	p3	SEE SHT. 26				
		2	S5	SEE SHT. 26				
		4	S6	SEE SHT. 26				
		2	S7	SEE SHT. 26				
		2	fp2	SEE SHT. 26				

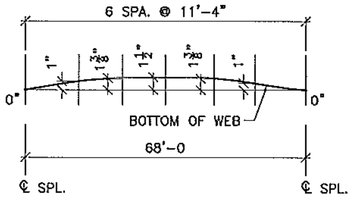
GIRDER WT: 22,357



SECTION M
(GIRDER ASS'Y)



SECTION T



CAMBER DIAGRAM

Vermont Agency of Transportation

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CK'D BY GFR OK'D BY

05/15/2012

RESUBMIT APPROVED X

BY C. CARLSON DATE 05/18/2012

SEE .dxf FILES FOR WEB ℄ CUTTING

SEE SHEET 26 FOR PIECE DETAILS

SEE SHEET B1 FOR NOTES

FINISH				
MATERIAL AASHTO M270 (ASTM A709) GRADE 50				
HOLES 15/16"ø U.O.N.				
ELECTRODES				
WELDS PER WPS				
SURFACE PREP				
	NO	DATE	DESCRIPTION	BY

REVISIONS

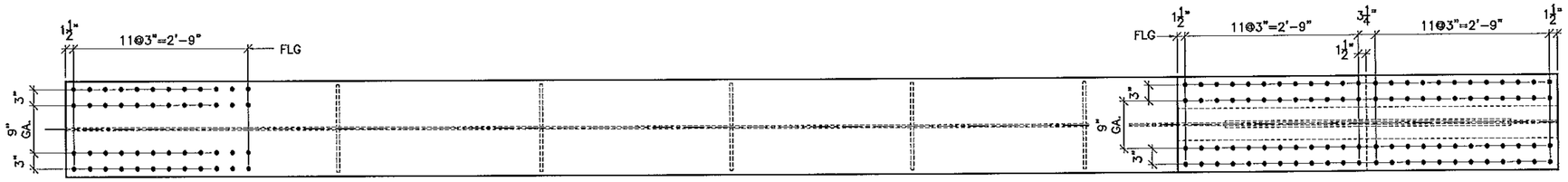
ARC ENTERPRISES, INC.

ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2646 – FAX: (207) 265-4054

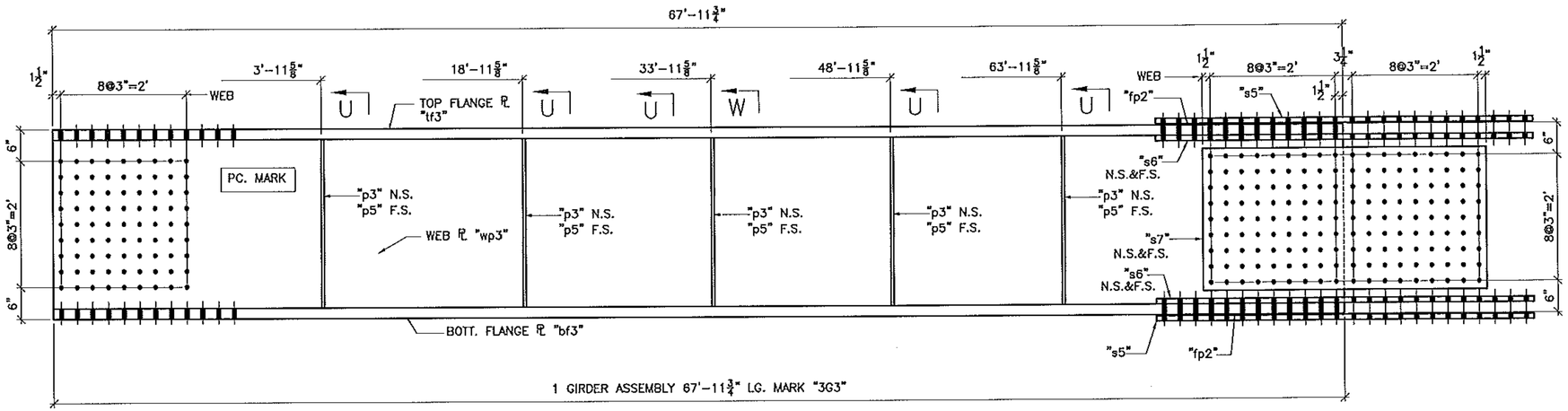
DRAFTER	JAC	STRINGER DETAILS	CONTRACT NO. BRO 1449 (25)
DATE	4/11/12	VERMONT AGENCY OF TRANSPORTATION, NEWPORT CITY, CO. OF ORLEANS RAILROAD SQUARE, TH11 (CLASS 2) MAJOR COLLECTOR, BRIDGE NO. 9	DWG. NO. 12
CHECKED	JS		
JOB #	12-100	O.C. REED & REED	

J:\C. DRAFTING\STSB12.DWG

PDF created with FinePrint pdfFactory trial version http://www.pdffactory.com



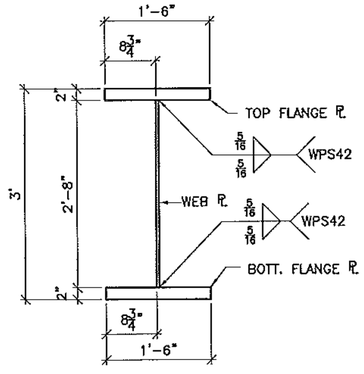
TOP VIEW (BOTTOM VIEW SIM.)



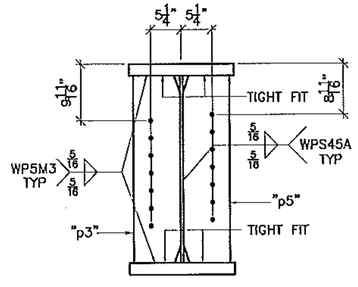
BILL OF MATERIAL

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	REMARKS	WT.	
1	3G3			BRIDGE GIRDER				
		1	wp3	℄ ½X32	67'-11¾		3703	
		1	tf3	℄ 2X18	67'-11¾		8331	
		1	bf3	℄ 2X18	67'-11¾		8331	
		5	p5	SEE SHT. 26				
		5	p3	SEE SHT. 26				
		2	S5	SEE SHT. 26				
		4	S6	SEE SHT. 26				
		2	S7	SEE SHT. 26				
		2	fp2	SEE SHT. 26				

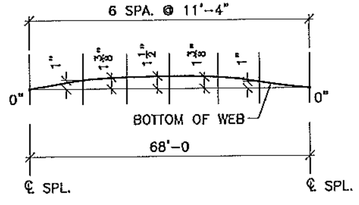
GIRDER WT: 22,357



SECTION M
(GIRDER ASS'Y)



SECTION U



CAMBER DIAGRAM

Vermont Agency of Transportation

RECEIVED

CK'D BY GFR OK'D BY

05/15/2012

RESUBMIT APPROVED X

BY C. CARLSON DATE 05/16/2012

SEE .dxf FILES FOR WEB ℄ CUTTING

SEE SHEET 26 FOR PIECE DETAILS

SEE SHEET 81 FOR NOTES

FINISH				
MATERIAL AASHTO M270 (ASTM A709) GRADE 50				
HOLES 15/16"ø U.O.N.				
ELECTRODES				
WELDS PER WPS				
SURFACE PREP				
	NO	DATE	DESCRIPTION	BY
	REVISIONS			

ARC ENTERPRISES, INC.

ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2648 – FAX: (207) 265-4054

DRAFTER	JAC	STRINGER DETAILS	CONTRACT NO.
DATE	4/11/12	VERMONT AGENCY OF TRANSPORTATION, NEWPORT CITY, CO. OF ORLEANS	BRO 1449 (25)
CHECKED	JS	RAILROAD SQUARE, TH1 (CLASS 2) MAJOR COLLECTOR, BRIDGE NO. 9	DWG. NO.
JOB #	12-100	G.C. REED & REED	13

J.A.C. DRAFTING/S1SB12/2013

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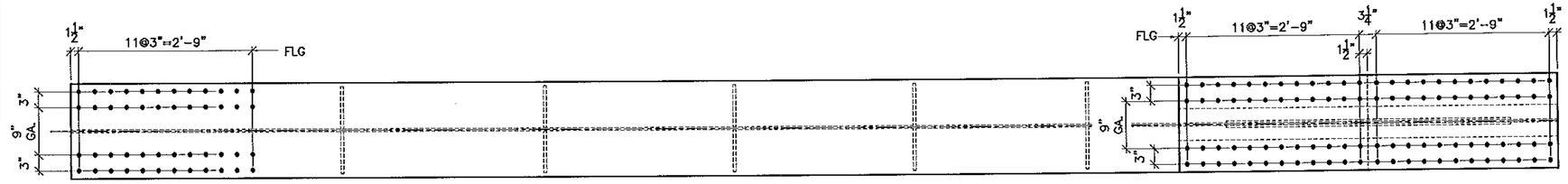
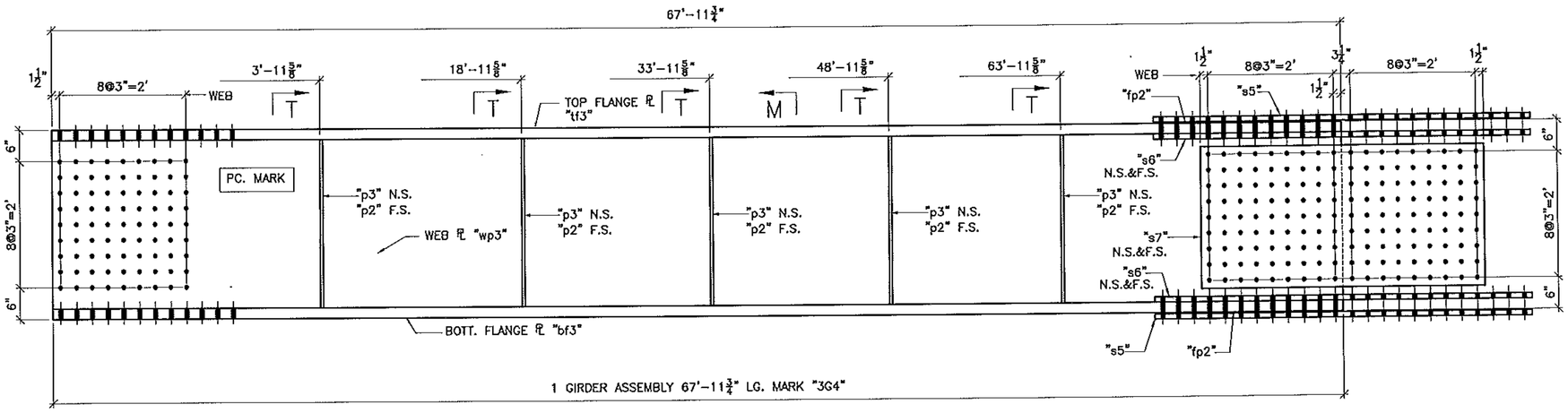


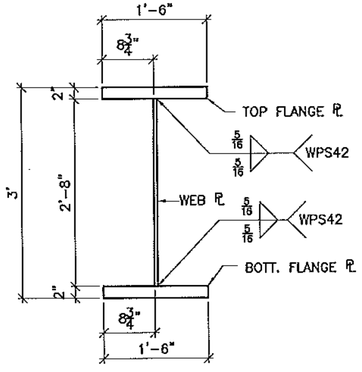
TOP VIEW (BOTTOM VIEW SIM.)



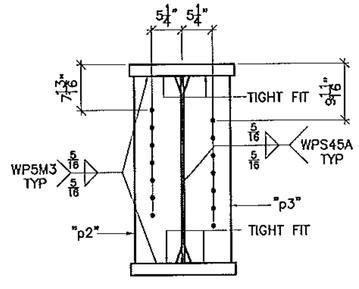
BILL OF MATERIAL

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	REMARKS	WT.	
1	3G4			BRIDGE GIRDER				
		1	wp3	℄ ½X32	67'-11¾		3703	
		1	tf3	℄ 2X18	67'-11¾		8331	
		1	bf3	℄ 2X18	67'-11¾		8331	
		5	p2	SEE SHT. 26				
		5	p3	SEE SHT. 26				
		2	S5	SEE SHT. 26				
		4	S6	SEE SHT. 26				
		2	S7	SEE SHT. 26				
		2	fp2	SEE SHT. 26				

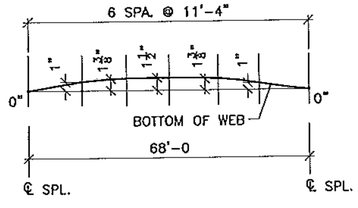
GIRDER WT: 22,357



SECTION M
(GIRDER ASS'Y)



SECTION T



CAMBER DIAGRAM

Vermont Agency of Transportation

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05/15/2012

RESUBMIT APPROVED X

BY C. CARLSON DATE 05/16/2012

SEE .dxf FILES FOR WEB ℄ CUTTING

SEE SHEET 26 FOR PIECE DETAILS

SEE SHEET B1 FOR NOTES

FINISH				
MATERIAL AASHTO M270 (ASTM A709) GRADE 50				
HOLES 15/16"ø U.O.N.				
ELECTRODES				
WELDS PER WPS				
SURFACE PREP				
	NO	DATE	DESCRIPTION REVISIONS	BY

ARC ENTERPRISES, INC.

ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2648 – FAX: (207) 265-4054

DRAFTER JAC	STRINGER DETAILS		CONTRACT NO. BRO 1449 (25)
DATE 4/11/12	VERMONT AGENCY OF TRANSPORTATION, NEWPORT CITY, CO. OF ORLEANS RAILROAD SQUARE, TH1 (CLASS 2) MAJOR COLLECTOR, BRIDGE NO. 8		
CHECKED JS	G.C. REED & REED		DWG. NO. 14
JOB # 12-100			

J.A.C. DRAFTING/5/15/2012/014

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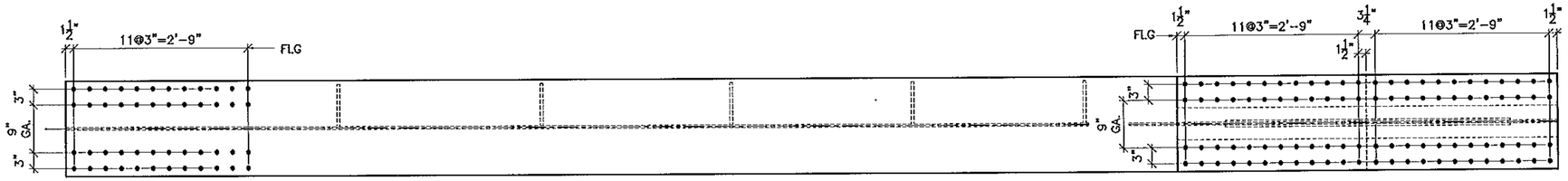
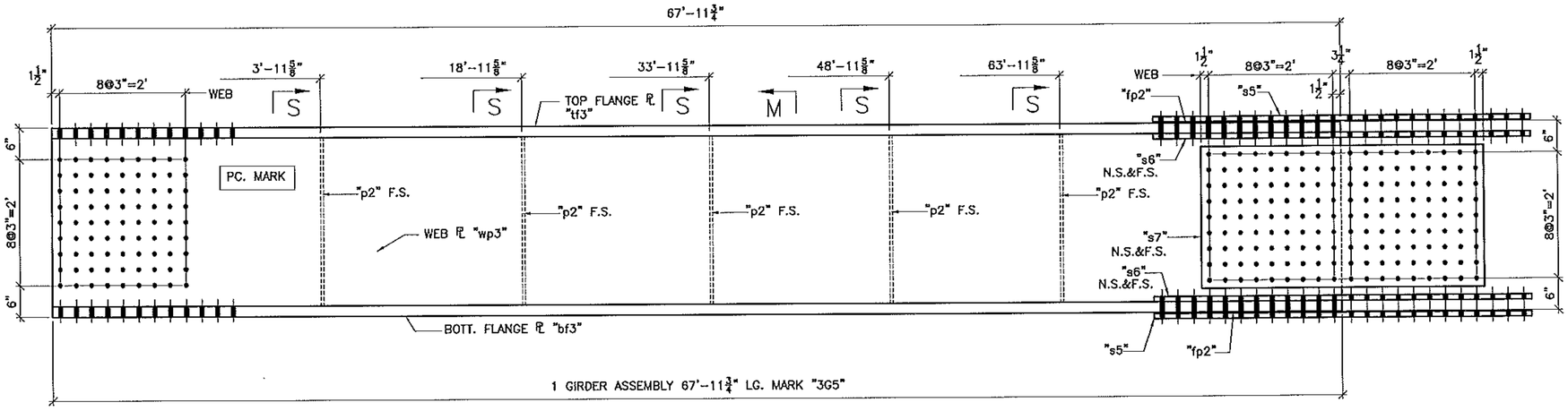


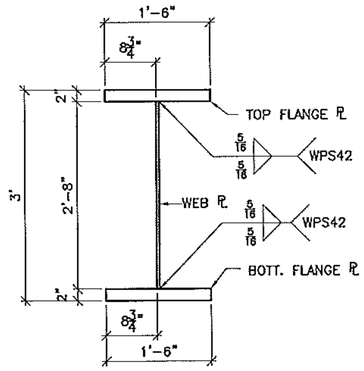
TOP VIEW (BOTTOM VIEW SIM.)



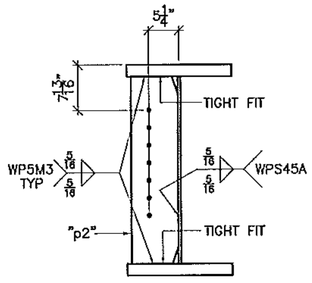
BILL OF MATERIAL

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	REMARKS	WT.
1	3G5			BRIDGE GIRDER			
		1	wp3	℄ ½X32	67'-11¾		3703
		1	tf3	℄ 2X18	67'-11¾		8331
		1	bf3	℄ 2X18	67'-11¾		8331
		5	p2	SEE SHT. 26			
		2	S5	SEE SHT. 26			
		4	S6	SEE SHT. 26			
		2	S7	SEE SHT. 26			
		2	fp2	SEE SHT. 26			

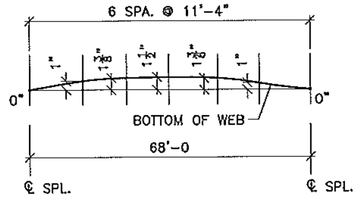
GIRDER WT: 22,177



SECTION M
(GIRDER ASS'Y)



SECTION S



CAMBER DIAGRAM

Vermont Agency of Transportation

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05/15/2012

RESUBMIT APPROVED X

BY C. CARLSON DATE 05/16/2012

SEE .dxf FILES FOR WEB ℄ CUTTING

SEE SHEET 26 FOR PIECE DETAILS

SEE SHEET B1 FOR NOTES

FINISH				
MATERIAL AASHTO M270 (ASTM A709) GRADE 50				
HOLES 15/16"ø U.O.N.				
ELECTRODES				
WELDS PER WPS				
SURFACE PREP				
	NO	DATE	DESCRIPTION	BY
	REVISIONS			

ARC ENTERPRISES, INC.

ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2646 – FAX: (207) 265-4054

DRAFTER	JAC	STRINGER DETAILS	CONTRACT NO. BRO 1449 (25)
DATE	4/11/12	VERMONT AGENCY OF TRANSPORTATION, NEWPORT CITY, CO. OF ORLEANS RAILROAD SQUARE, TH1 (CLASS 2) MAJOR COLLECTOR, BRIDGE NO. 9	
CHECKED	JS		
JOB #	12-100	G.C. REED & REED	DWG. NO. 15

J.A.C. DRAFTING/515312/015

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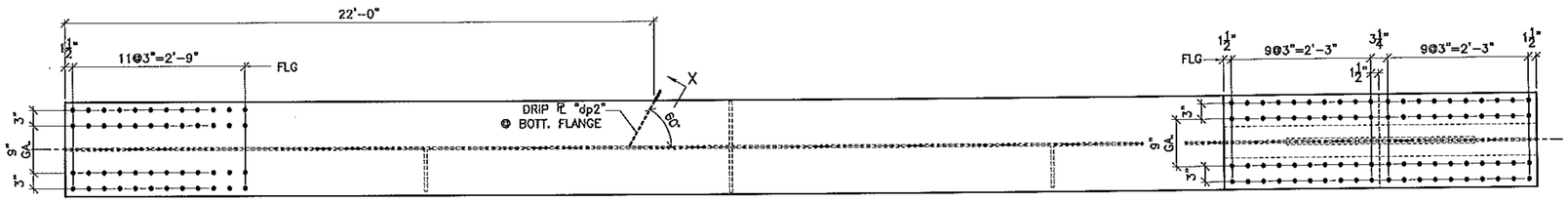
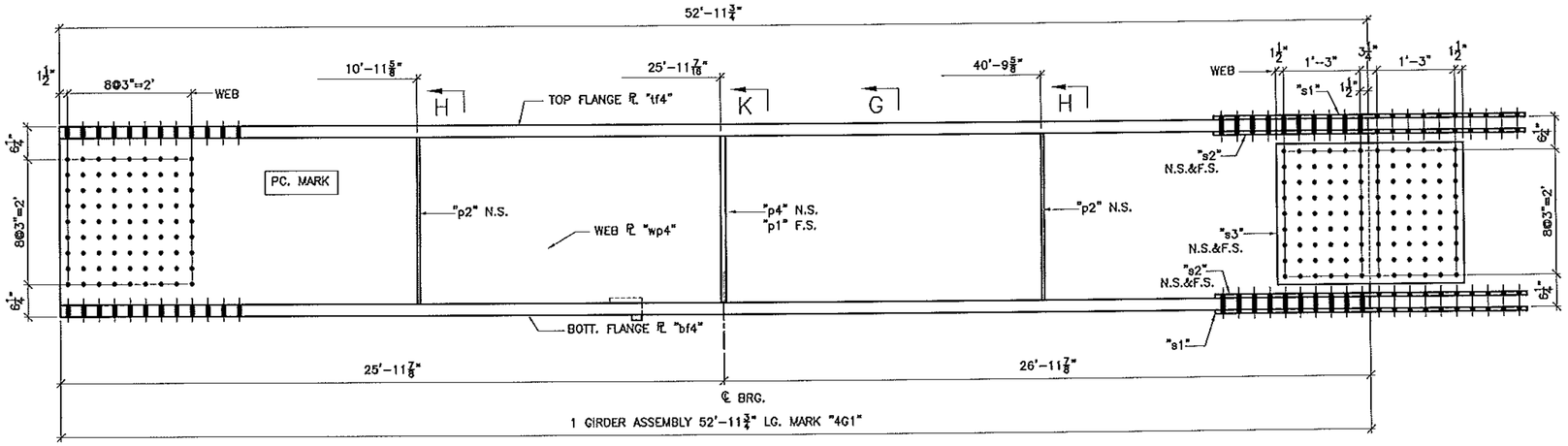


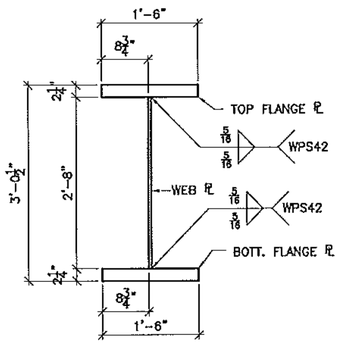
TOP VIEW (BOTTOM VIEW SIM.)



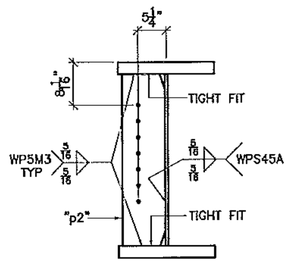
BILL OF MATERIAL

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	REMARKS	WT.	
1	4G1			BRIDGE GIRDER				
		1	wp4	℄ ½X32	52'-11¾		2886	
		1	tf4	℄ 2½X18	52'-11¾		7305	
		1	bf4	℄ 2½X18	52'-11¾		7305	
		1	p1	SEE SHT. 26				
		2	p2	SEE SHT. 26				
		1	p4	SEE SHT. 26				
		2	s1	SEE SHT. 26				
		4	s2	SEE SHT. 26				
		2	s3	SEE SHT. 26				

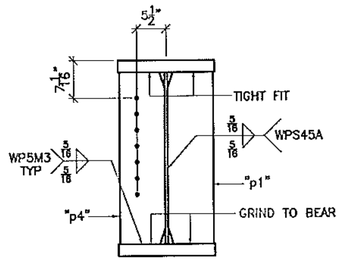
GIRDER WT: 18,416



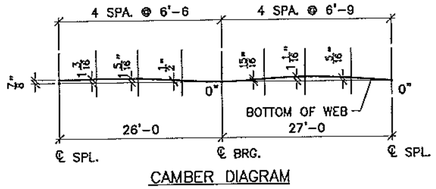
SECTION G
(GIRDER ASS'Y)



SECTION H



SECTION K



CAMBER DIAGRAM

Vermont Agency of Transportation

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CK'D BY GFR OK'D BY

05/15/2012

RESUBMIT APPROVED X

BY C. CARLSON DATE 05/16/2012

SEE .dxf FILES FOR WEB ℄ CUTTING

SEE SHEET 26 FOR PIECE DETAILS

SEE SHEET B1 FOR NOTES

FINISH				
MATERIAL AASHTO M270 (ASTM A709) GRADE 50				
HOLES 15/16"ø U.O.N.				
ELECTRODES				
WELDS PER WPS				
SURFACE PREP	1	5/15/12	PER APPROVAL	JAC
	NO	DATE	DESCRIPTION	BY
	REVISIONS			

ARC ENTERPRISES, INC.

ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2546 – FAX: (207) 265-4054

DRAFTER	JAC	STRINGER DETAILS	CONTRACT NO. BRO 1449 (25)
DATE	4/11/12	VERMONT AGENCY OF TRANSPORTATION, NEWPORT CITY, CO. OF ORLEANS RAILROAD SQUARE, TH11 (CLASS 2) MAJOR COLLECTOR, BRIDGE NO. 8	DWG. NO. 16
CHECKED	JS	G.C. REED & REED	
JOB #	12-100		

J:\A.C. DRAFTING\2012\12-100

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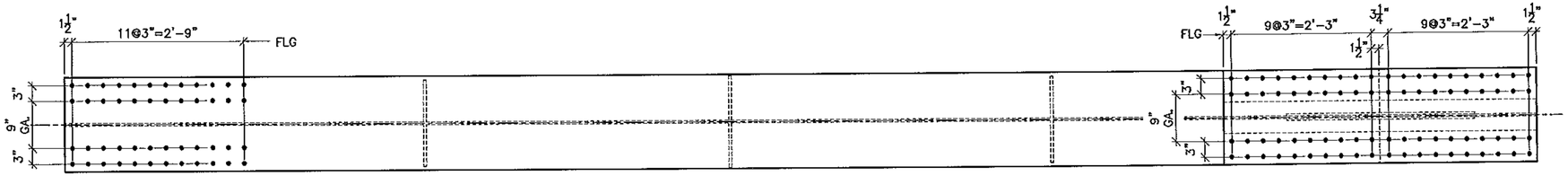
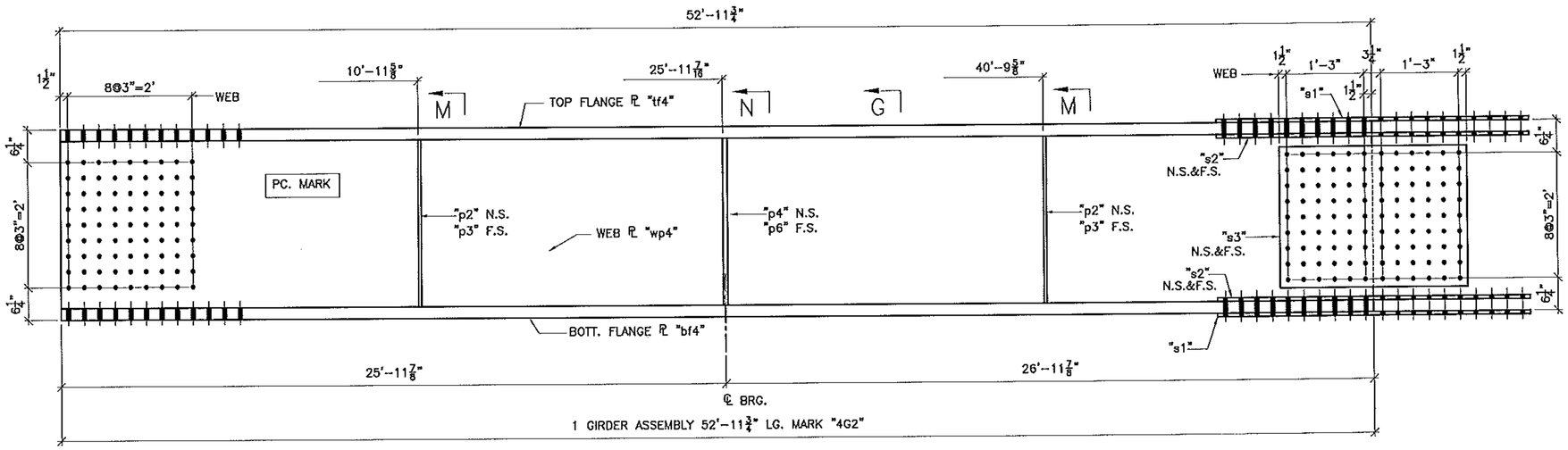


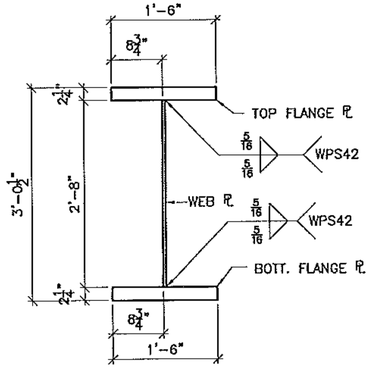
TOP VIEW (BOTTOM VIEW SIM.)



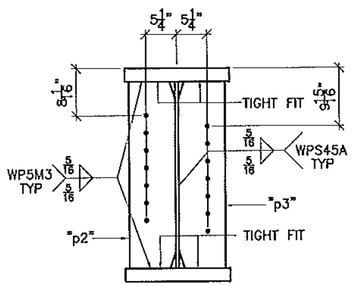
BILL OF MATERIAL

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	REMARKS	WT.
1	4G2			BRIDGE GIRDER			
		1	wp4	℄ ½X32	52'-11¾		2886
		1	tf4	℄ 2½X18	52'-11¾		7305
		1	bf4	℄ 2½X18	52'-11¾		7305
		1	p4	SEE SHT. 26			
		2	p2	SEE SHT. 26			
		1	p6	SEE SHT. 26			
		2	p3	SEE SHT. 26			
		2	S1	SEE SHT. 26			
		4	S2	SEE SHT. 26			
		2	S3	SEE SHT. 26			

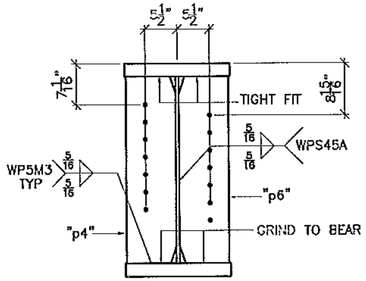
GIRDER WT: 18,488



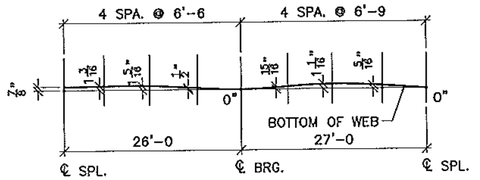
SECTION G
(GIRDER ASS'Y)



SECTION M



SECTION N



CAMBER DIAGRAM

Vermont Agency of Transportation

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CK'D BY GFR OK'D BY _____

05/15/2012

RESUBMIT _____ APPROVED X _____

BY C. CARLSON DATE 05/16/2012

SEE .dxf FILES FOR WEB ℄ CUTTING

SEE SHEET 26 FOR PIECE DETAILS

SEE SHEET B1 FOR NOTES

FINISH				
MATERIAL AASHTO M270 (ASTM A709) GRADE 50				
HOLES 15/16"ø U.O.N.				
ELECTRODES				
WELDS PER WPS				
SURFACE PREP	1	5/15/12	PER APPROVAL	JAC
	NO	DATE	DESCRIPTION	BY
	REVISIONS			

ARC ENTERPRISES, INC.

ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2648 - FAX: (207) 265-4054

DRAFTER JAC	STRINGER DETAILS	CONTRACT NO. BRO 1449 (25)
DATE 4/11/12	VERMONT AGENCY OF TRANSPORTATION, NEWPORT CITY, CO. OF ORLEANS RAILROAD SQUARE, TH1 (CLASS 2) MAJOR COLLECTOR, BRIDGE NO. 9	DWG. NO. 17
CHECKED JS	D.C. REED & REED	
JOB # 12-100		

J:\A.C. DRAFTING\SISBI2\017

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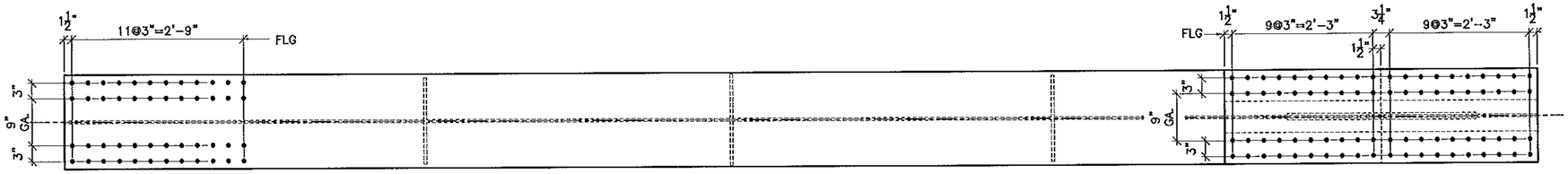
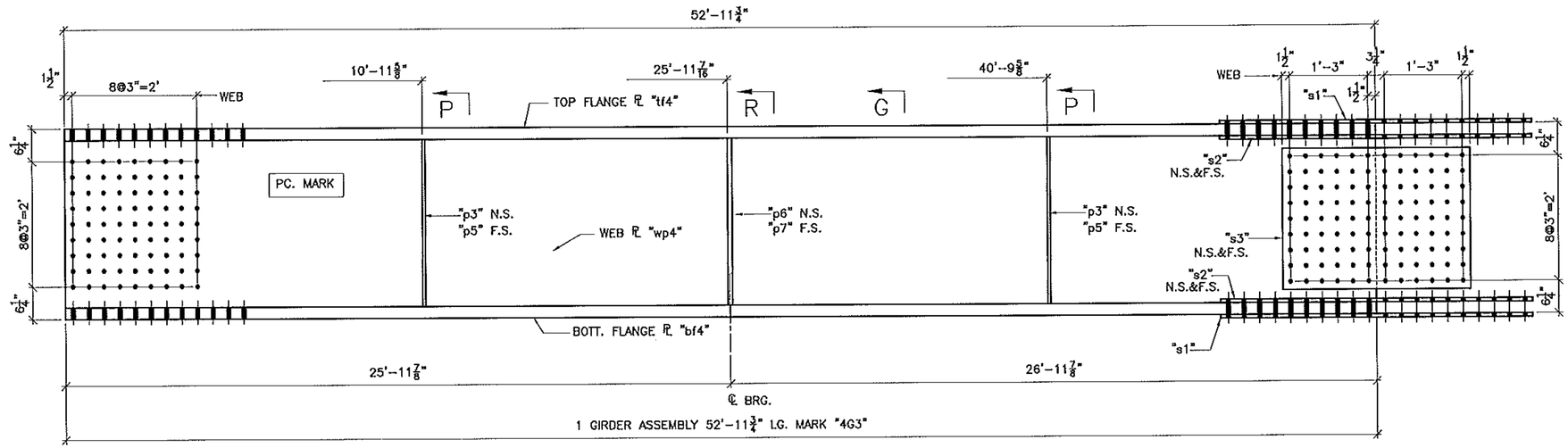


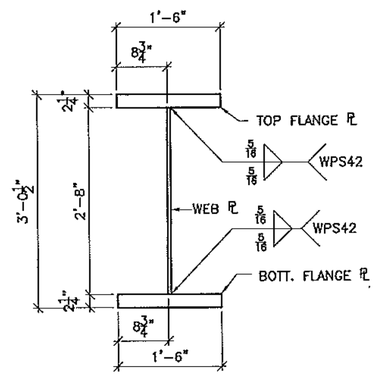
TOP VIEW (BOTTOM VIEW SIM.)



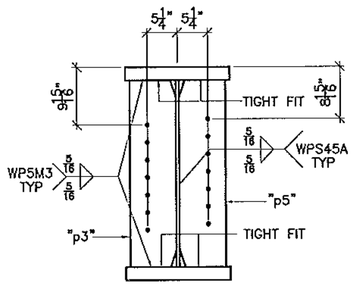
BILL OF MATERIAL

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	REMARKS	WT.	
1	4G3			BRIDGE GIRDER				
		1	wp4	℄ ½X32	52'-11¾"		2866	
		1	tf4	℄ 2½X18	52'-11¾"		7305	
		1	bf4	℄ 2½X18	52'-11¾"		7305	
		1	p7	SEE SHT. 26				
		2	p5	SEE SHT. 26				
		1	p6	SEE SHT. 26				
		2	p3	SEE SHT. 26				
		2	S1	SEE SHT. 26				
		4	S2	SEE SHT. 26				
		2	S3	SEE SHT. 26				

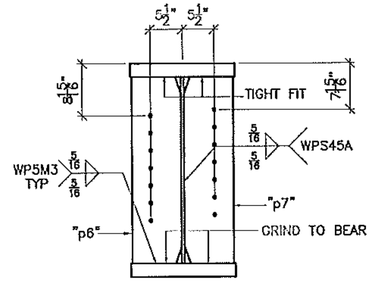
GIRDER WT: 18,488



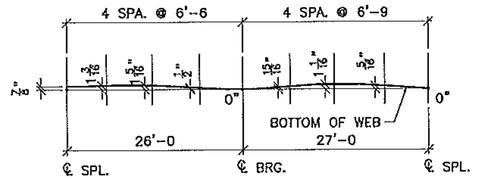
SECTION G
(GIRDER ASS'Y)



SECTION P



SECTION R



CAMBER DIAGRAM

Vermont Agency of Transportation

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RESUBMIT APPROVED X

BY C. CARLSON DATE 05/16/2012

SEE .dxf FILES FOR WEB ℄ CUTTING

SEE SHEET 26 FOR PIECE DETAILS

SEE SHEET B1 FOR NOTES

FINISH				
MATERIAL AASHTO M270 (ASTM A709) GRADE 50				
HOLES 15/16"ø U.O.N.				
ELECTRODES				
WELDS PER WPS				
SURFACE PREP	1	5/15/12	PER APPROVAL	JAC
	NO	DATE	DESCRIPTION	BY
	REVISIONS			

ARC ENTERPRISES, INC.

ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2648 – FAX: (207) 265-4054

DRAFTER JAC	STRINGER DETAILS		CONTRACT NO. BRO 1449 (25)
DATE 4/11/12	VERMONT AGENCY OF TRANSPORTATION, NEWPORT CITY, CO. OF ORLEANS RAILROAD SQUARE, TH1 (CLASS 2) MAJOR COLLECTOR, BRIDGE NO. 9		
CHECKED JS			DWG. NO.
JOB # 12-100	C.C. REED & REED		18

J:\A.C. DRAFTING\STSB12\018

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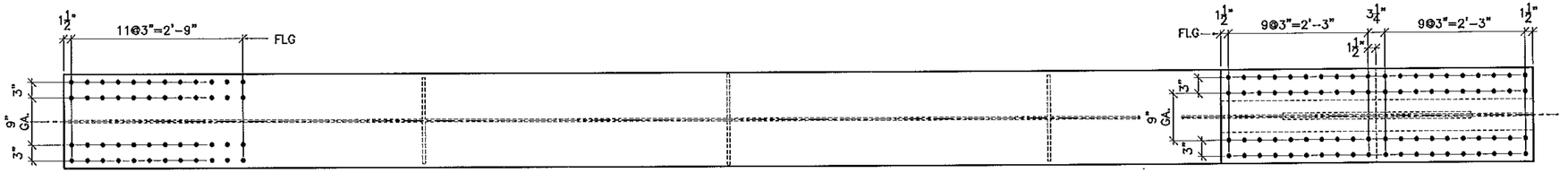
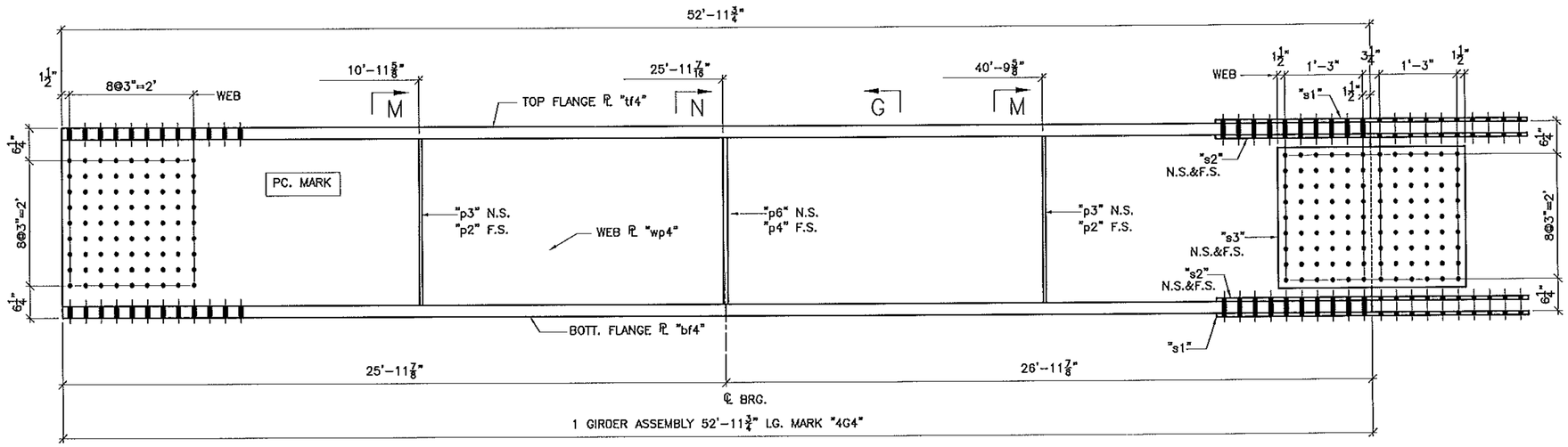


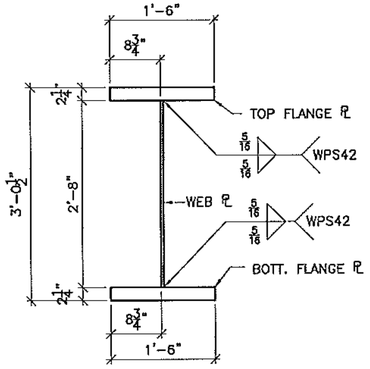
TOP VIEW (BOTTOM VIEW SIM.)



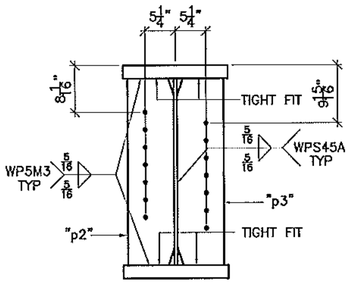
BILL OF MATERIAL

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	REMARKS	WT.
1	4G4			BRIDGE GIRDER			
		1	wp4	PL ½X32	52'-11¾		2885
		1	tf4	PL 2½X18	52'-11¾		7305
		1	bf4	PL 2½X18	52'-11¾		7305
		1	p1	SEE SHT. 26			
		2	p2	SEE SHT. 26			
		1	p6	SEE SHT. 26			
		2	p3	SEE SHT. 26			
		2	S1	SEE SHT. 26			
		4	S2	SEE SHT. 26			
		2	S3	SEE SHT. 26			

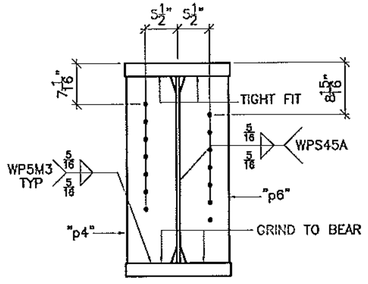
GIRDER WT: 18,488



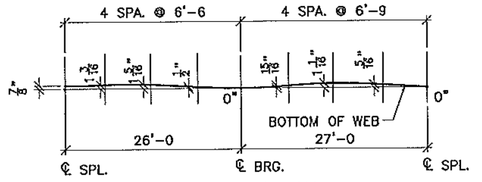
SECTION G
(GIRDER ASS'Y)



SECTION M



SECTION N



CAMBER DIAGRAM

Vermont Agency of Transportation

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RESUBMIT APPROVED X

BY C. CARLSON DATE 05/16/2012

SEE .dxf FILES FOR WEB PL CUTTING

SEE SHEET 26 FOR PIECE DETAILS

SEE SHEET B1 FOR NOTES

FINISH				
MATERIAL AASHTO M270 (ASTM A709) GRADE 50				
HOLES 15/16"ø U.O.N.				
ELECTRODES				
WELDS PER WPS				
SURFACE PREP	1	5/15/12	PER APPROVAL	JAC
	NO	DATE	DESCRIPTION	BY
	REVISIONS			

ARC ENTERPRISES, INC.

ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2648 – FAX: (207) 265-4054

DRAFTER JAC	STRINGER DETAILS	CONTRACT NO. BRO 1449 (25)
DATE 4/11/12	VERMONT AGENCY OF TRANSPORTATION, NEWPORT CITY, CO. OF ORLEANS RAILROAD SQUARE, 1911 (CLASS 2) MAJOR COLLECTOR, BRIDGE NO. 9	
CHECKED JS		DWG. NO.
JOB # 12-100	G.C. REED & REED	19

J.A.C. DRAFTING/5/18/12/019

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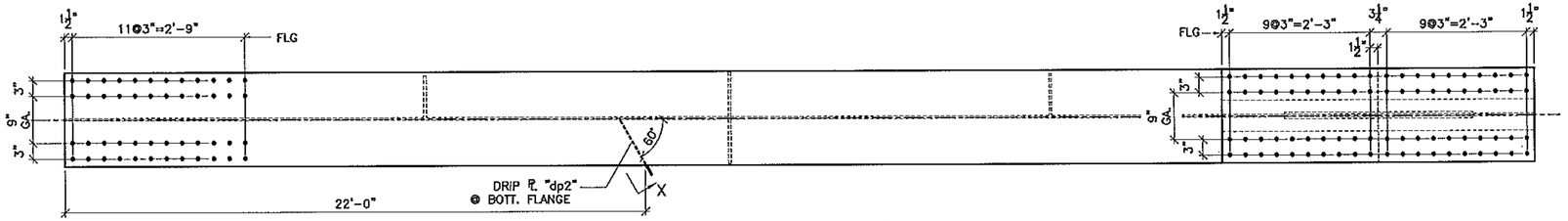
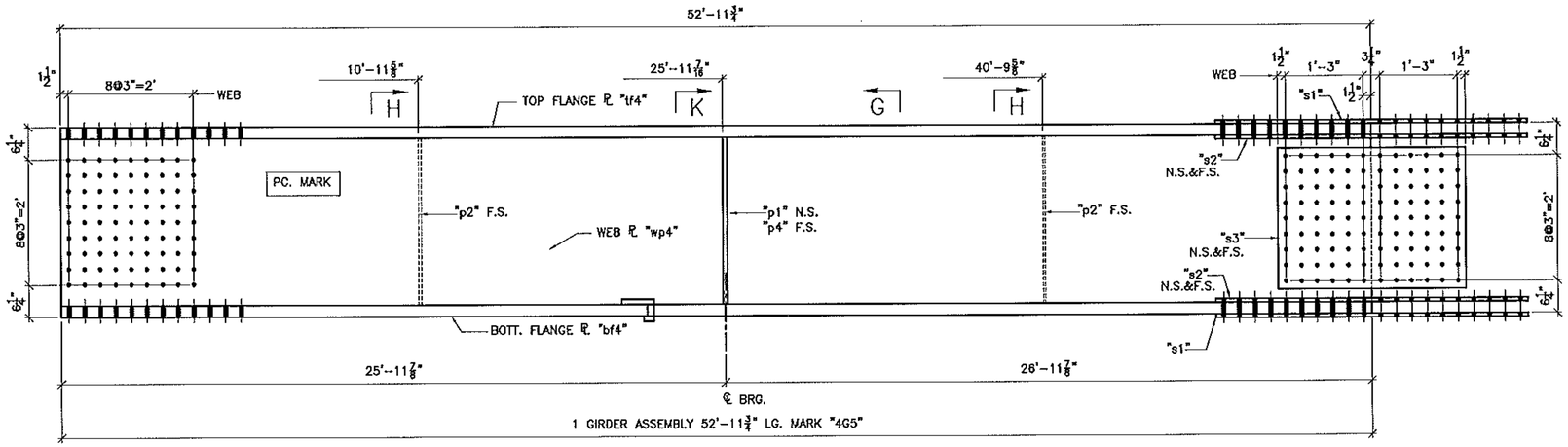


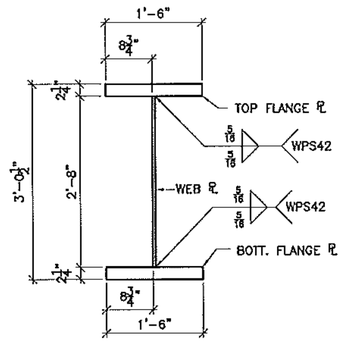
TOP VIEW (BOTTOM VIEW SIM.)



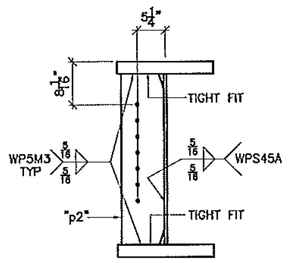
BILL OF MATERIAL

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	REMARKS	WT.
1	4G5			BRIDGE GIRDER			
		1	wp4	℄ ⅜X32	52'-11¾		2868
		1	tf4	℄ 2½X18	52'-11¾		7305
		1	bf4	℄ 2½X18	52'-11¾		7305
		1	p4	SEE SHT. 26			
		2	p2	SEE SHT. 26			
		1	p1	SEE SHT. 26			
		2	S1	SEE SHT. 26			
		4	S2	SEE SHT. 26			
		2	S3	SEE SHT. 26			

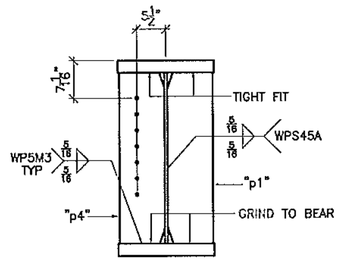
GIRDER WT: 18,416



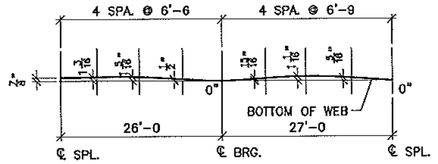
SECTION G
(GIRDER ASS'Y)



SECTION H



SECTION K



CAMBER DIAGRAM

Vermont Agency of Transportation

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RESUBMIT APPROVED X

BY C. CARLSON DATE 05/16/2012

SEE .dxf FILES FOR WEB ℄ CUTTING

SEE SHEET 26 FOR PIECE DETAILS

SEE SHEET B1 FOR NOTES

FINISH				
MATERIAL AASHTO M270 (ASTM A709) GRADE 50				
HOLES 15/16"ø U.O.N.				
ELECTRODES				
WELDS PER WPS				
SURFACE PREP	1	5/15/12	PER APPROVAL	JAC
	NO	DATE	DESCRIPTION	BY
	REVISIONS			

ARC ENTERPRISES, INC.

ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2648 - FAX: (207) 265-4054

DRAFTER	JAC	STRINGER DETAILS	CONTRACT NO. BRO 1449 (25)
DATE	4/11/12	VERMONT AGENCY OF TRANSPORTATION, NEWPORT CITY, CO. OF ORLEANS RAILROAD SQUARE, TH11 (CLASS 2) MAJOR COLLECTOR, BRIDGE NO. 8	DWG. NO. 20
CHECKED	JS	G.C. REED & REED	
JOB #	12-100		

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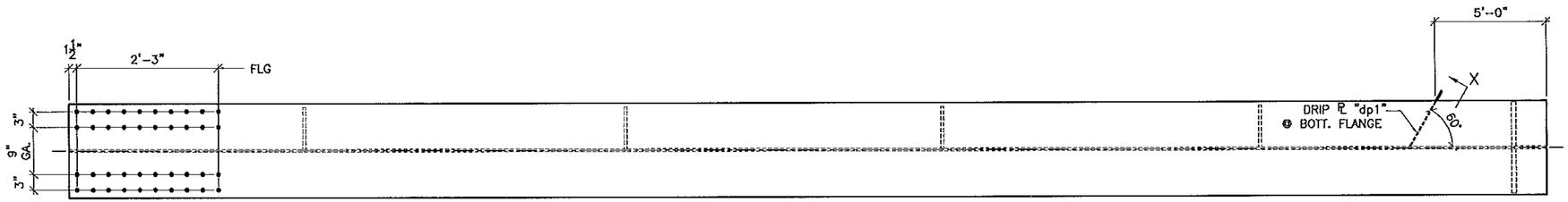
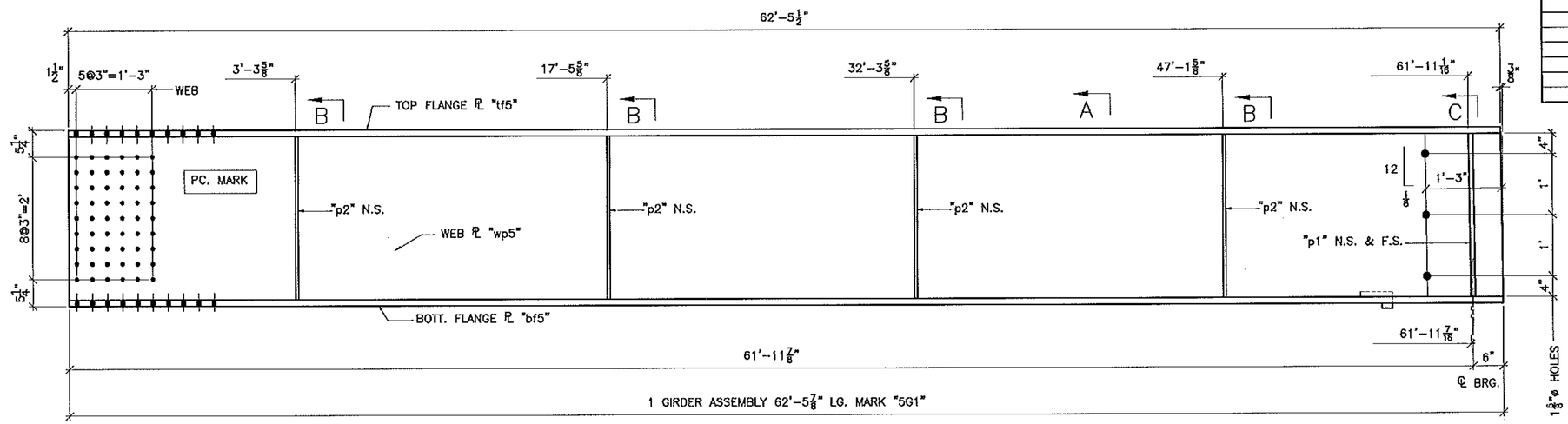


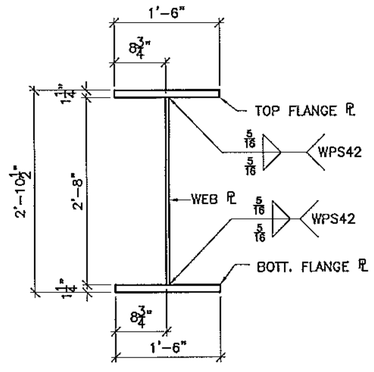
TOP VIEW (BOTTOM VIEW SIM.)



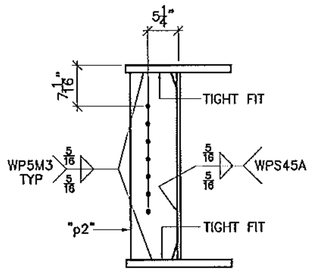
BILL OF MATERIAL

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	REMARKS	WT.
1	5G1			BRIDGE GIRDER			
		1	wp5	℄ ½X32	62'-5⅞"		3403
		1	bf5	℄ 1¼X18	62'-5⅞"		4788
		1	bf5	℄ 1¼X18	62'-5⅞"		4788
		2	p1	SEE SHT. 26			
		4	p2	SEE SHT. 26			

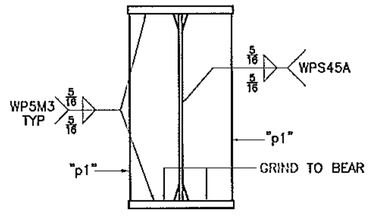
GIRDER WT: 13,253



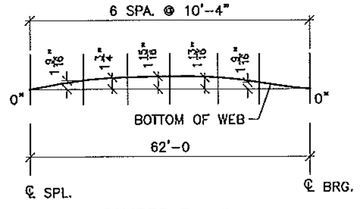
SECTION A
(GIRDER ASS'Y)



SECTION B



SECTION C



CAMBER DIAGRAM

Vermont Agency of Transportation

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RESUBMIT APPROVED X

BY C. CARLSON DATE 05/16/2012

SEE .dxf FILES FOR WEB ℄ CUTTING

SEE SHEET 26 FOR PIECE DETAILS

SEE SHEET B1 FOR NOTES

FINISH				
MATERIAL AASHTO M270 (ASTM A709) GRADE 50				
HOLES 15/16"ø U.O.N.				
ELECTRODES				
WELDS PER WPS				
SURFACE PREP	1	5/15/12	PER APPROVAL	JAC
	NO	DATE	DESCRIPTION	BY
	REVISIONS			

ARC ENTERPRISES, INC.

ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2648 – FAX: (207) 265-4054

DRAFTER JAC	STRINGER DETAILS	CONTRACT NO.	
DATE 4/11/12	VERMONT AGENCY OF TRANSPORTATION, NEWPORT CITY, CO. OF ORLEANS RAILROAD SQUARE, TH11 (CLASS 2) MAJOR COLLECTOR, BRIDGE NO. 9	BRO 1449 (25)	
CHECKED JS	G.C. REED & REED	DWG. NO.	
JOB # 12-100		21	

J:\A.C. DRAFTING\5TSB12\021

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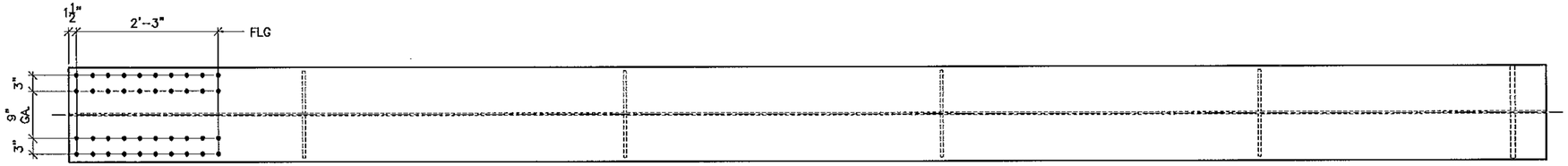
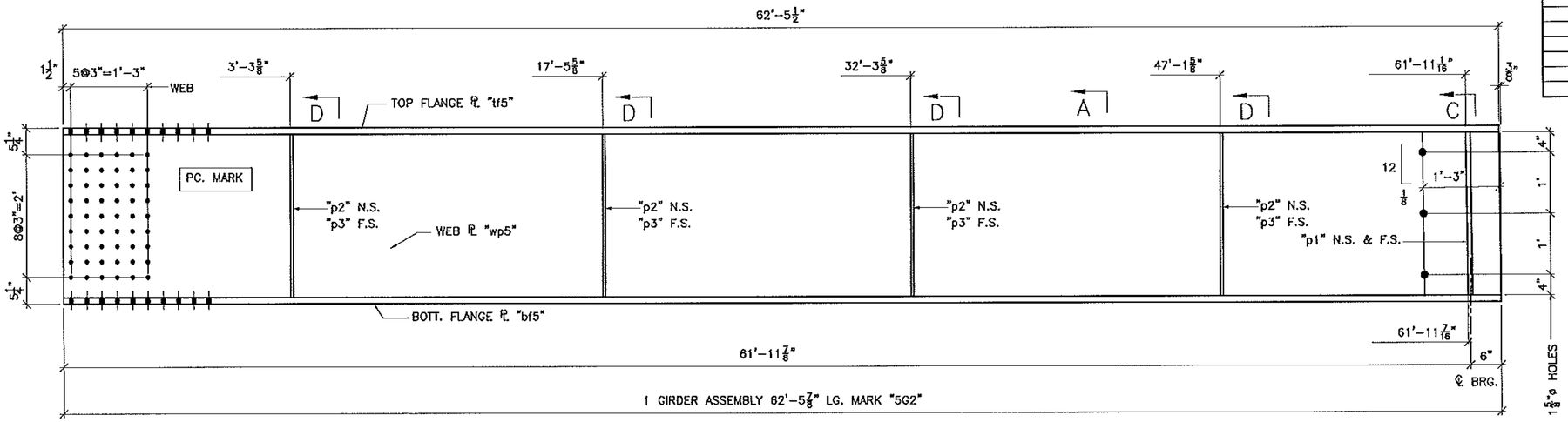


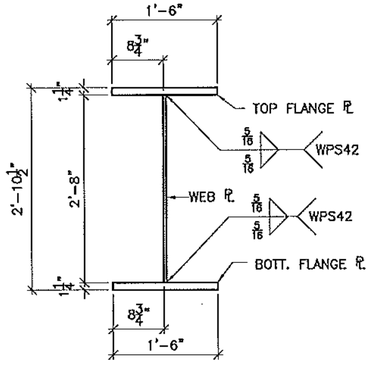
TOP VIEW (BOTTOM VIEW SIM.)



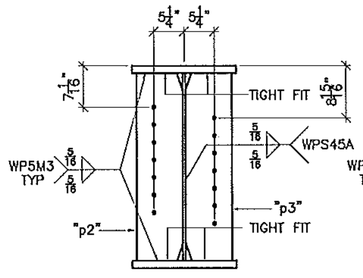
BILL OF MATERIAL

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	REMARKS	WT.	
1	5G2			BRIDGE GIRDER				
		1	wp5	℄ ½X32	62'-5⅞		3403	
		1	bf5	℄ 1¼X18	62'-5½		4788	
		1	bf5	℄ 1¼X18	62'-5½		4788	
		2	p1	SEE SHT. 26				
		4	p2	SEE SHT. 26				
		4	p3	SEE SHT. 26				

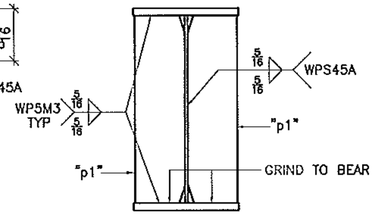
GIRDER WT: 13,397



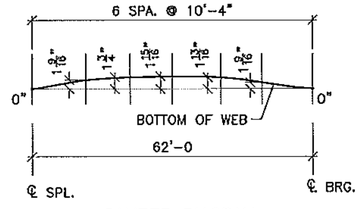
SECTION A
(GIRDER ASS'Y)



SECTION D



SECTION C



CAMBER DIAGRAM

Vermont Agency of Transportation
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05/15/2012
RESUBMIT APPROVED X
BY C. CARLSON DATE 05/16/2012

SEE .dxf FILES FOR WEB ℄ CUTTING

SEE SHEET 26 FOR PIECE DETAILS

SEE SHEET B1 FOR NOTES

FINISH				
MATERIAL AASHTO M270 (ASTM A709) GRADE 50				
HOLES 15/16"ø U.O.N.				
ELECTRODES				
WELDS PER WPS				
SURFACE PREP	1	5/15/12	PER APPROVAL	JAC
	NO	DATE	DESCRIPTION	BY
	REVISIONS			

ARC ENTERPRISES, INC.
ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2648 – FAX: (207) 265-4054

DRAFTER	JAC	STRINGER DETAILS	CONTRACT NO. BRO 1449 (25)
DATE	4/11/12	VERMONT AGENCY OF TRANSPORTATION, NEWPORT CITY, CO. OF ORLEANS RAILROAD SQUARE, BR1 (CLASS 2) MAJOR COLLECTOR, BRIDGE NO. 9	DWG. NO. 22
CHECKED	JS	G.C. REED & REED	
JOB #	12-100		

J.A.C. DRAFTING/5/15/12/2012

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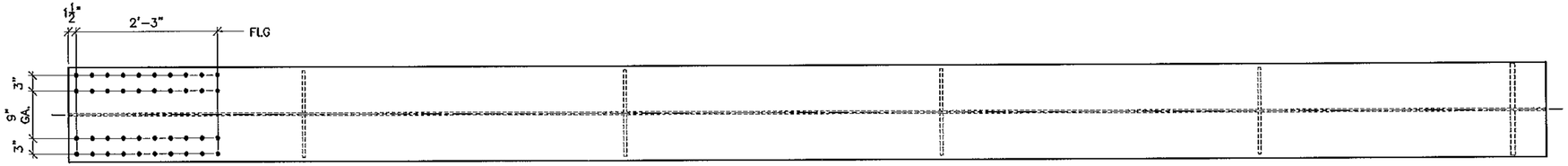
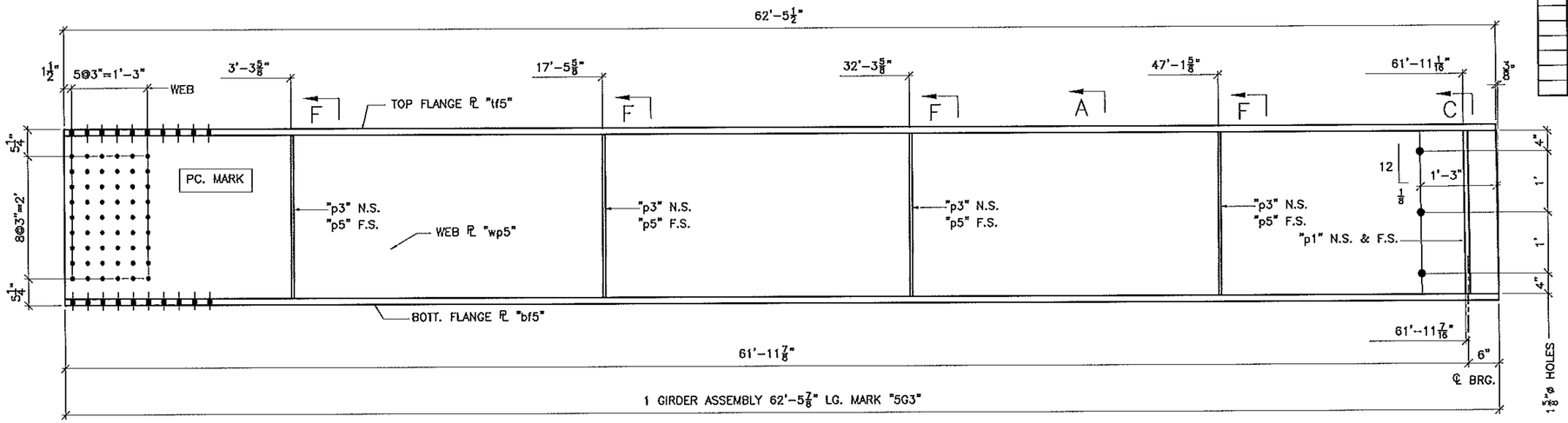


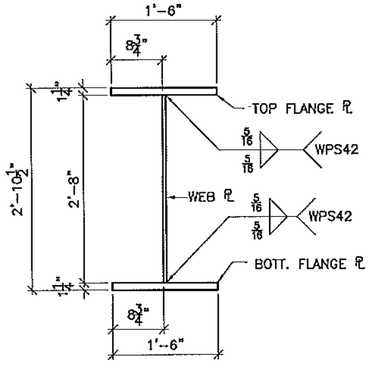
TOP VIEW (BOTTOM VIEW SIM.)



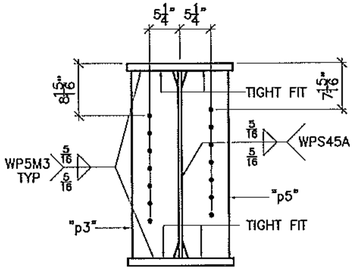
BILL OF MATERIAL

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	REMARKS	WT.
1	5G3			BRIDGE GIRDER			
		1	wp5	℄ ½X32	62'-5⅞		3403
		1	tf5	℄ 1½X18	62'-5⅞		4786
		1	bf5	℄ 1½X18	62'-5⅞		4786
		2	p1	SEE SHT. 26			
		4	p3	SEE SHT. 26			
		4	p5	SEE SHT. 26			

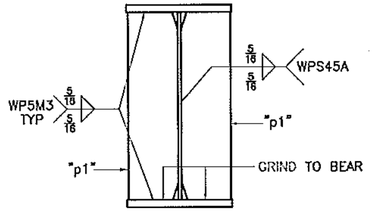
GIRDER WT: 13,397



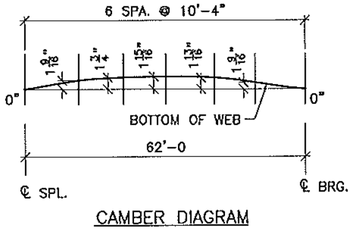
SECTION A
(GIRDER ASS'Y)



SECTION F



SECTION C



CAMBER DIAGRAM

Vermont Agency of Transportation

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05/15/2012

RESUBMIT APPROVED X

BY C. CARLSON DATE 05/16/2012

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SEE SHEET 26 FOR PIECE DETAILS

SEE SHEET B1 FOR NOTES

FINISH				
MATERIAL AASHTO M270 (ASTM A709) GRADE 50				
HOLES 15/16"ø U.O.N.				
ELECTRODES				
WELDS PER WPS				
SURFACE PREP	1	5/15/12	PER APPROVAL	JAC
	NO	DATE	DESCRIPTION	BY
	REVISIONS			

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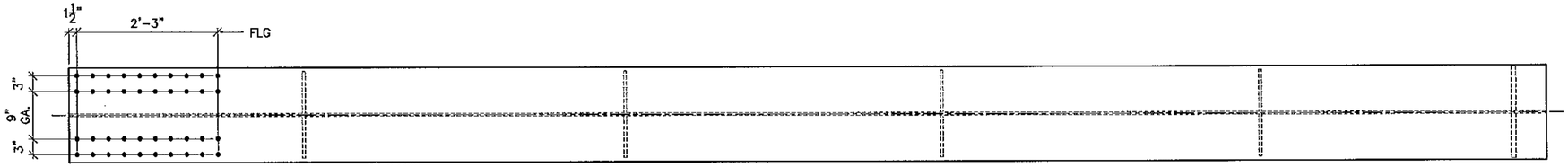
ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2646 - FAX: (207) 265-4054

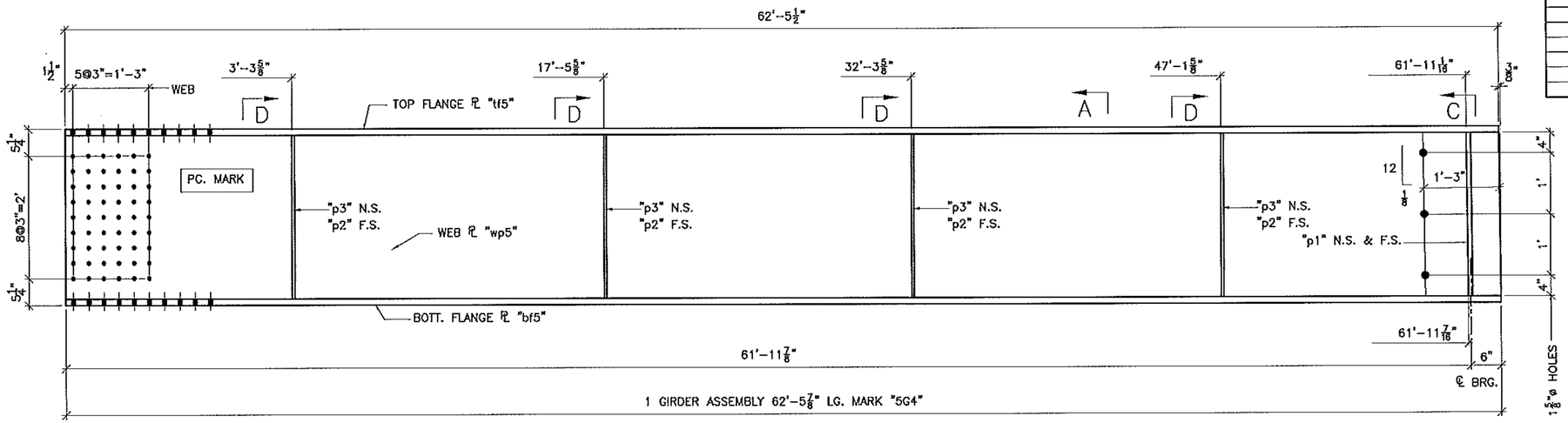
DRAFTER JAC	STRINGER DETAILS	CONTRACT NO.	
DATE 4/11/12	VERMONT AGENCY OF TRANSPORTATION, NEWPORT CITY, CO. OF ORLEANS RAILROAD SQUARE, TH11 (CLASS 2) MAJOR COLLECTOR, BRIDGE NO. 9	BRO 1449 (25)	
CHECKED JS	G.C. REED & REED	DWG. NO. 23	
JOB # 12-100			

J.A.C. DRAFTING/S1SB12/2023

PDF created with FinePrint pdfFactory trial version http://www.pdffactory.com



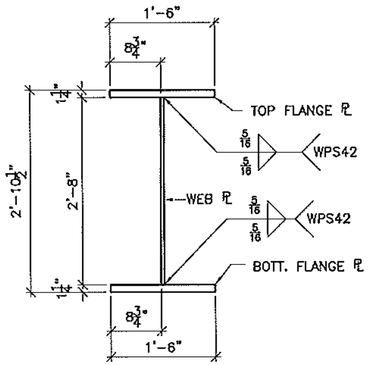
TOP VIEW (BOTTOM VIEW SIM.)



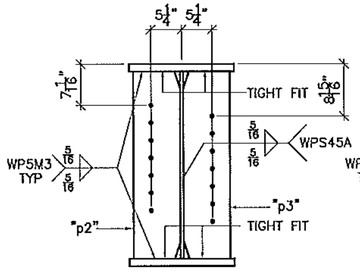
BILL OF MATERIAL

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	REMARKS	WT.
1	5G4			BRIDGE GIRDER			
		1	wp5	℄ ½X32	62'-5⅞		3403
		1	tf5	℄ 1½X18	62'-5⅞		4788
		1	bf5	℄ 1½X18	62'-5⅞		4788
		2	p1	SEE SHT. 26			
		4	p2	SEE SHT. 26			
		4	p3	SEE SHT. 26			

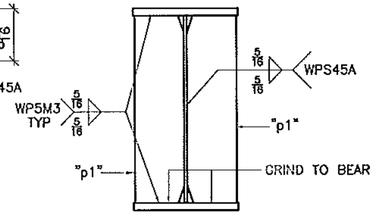
GIRDER WT: 13,397



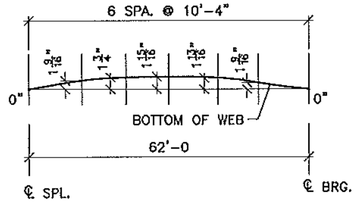
SECTION A
(GIRDER ASS'Y)



SECTION D



SECTION C



CAMBER DIAGRAM

Vermont Agency of Transportation

RECEIVED

CK'D BY GFR OK'D BY

05/15/2012

RESUBMIT APPROVED X

BY C. CARLSON DATE 05/16/2012

SEE .dxf FILES FOR WEB ℄ CUTTING

SEE SHEET 26 FOR PIECE DETAILS

SEE SHEET B1 FOR NOTES

FINISH				
MATERIAL AASHTO M270 (ASTM A709) GRADE 50				
HOLES 15/16"ø U.O.N.				
ELECTRODES				
WELDS PER WPS				
SURFACE PREP	1	5/15/12	PER APPROVAL	JAC
	NO	DATE	DESCRIPTION	BY
	REVISIONS			

ARC ENTERPRISES, INC.

ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2646 - FAX: (207) 265-4054

DRAFTER	JAC	STRINGER DETAILS	CONTRACT NO. BRO 1449 (25)
DATE	4/11/12	VERMONT AGENCY OF TRANSPORTATION, NEWPORT CITY, CO. OF ORLEANS RAILROAD SQUARE, TH11 (CLASS 2) MAJOR COLLECTOR, BRIDGE NO. 9	
CHECKED	JS	G.C. REED & REED	DWG. NO. 24
JOB #	12-100		

J:\C DRAWINGS\5G4\2012\12-100 5G4 STRINGER DETAILS.dwg 4/11/2012

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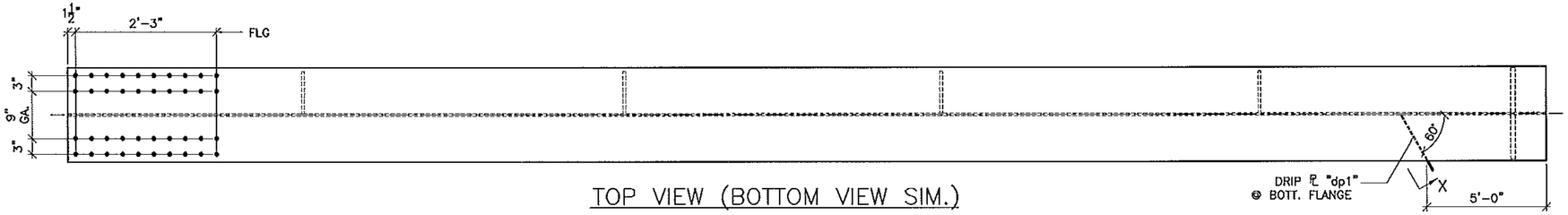
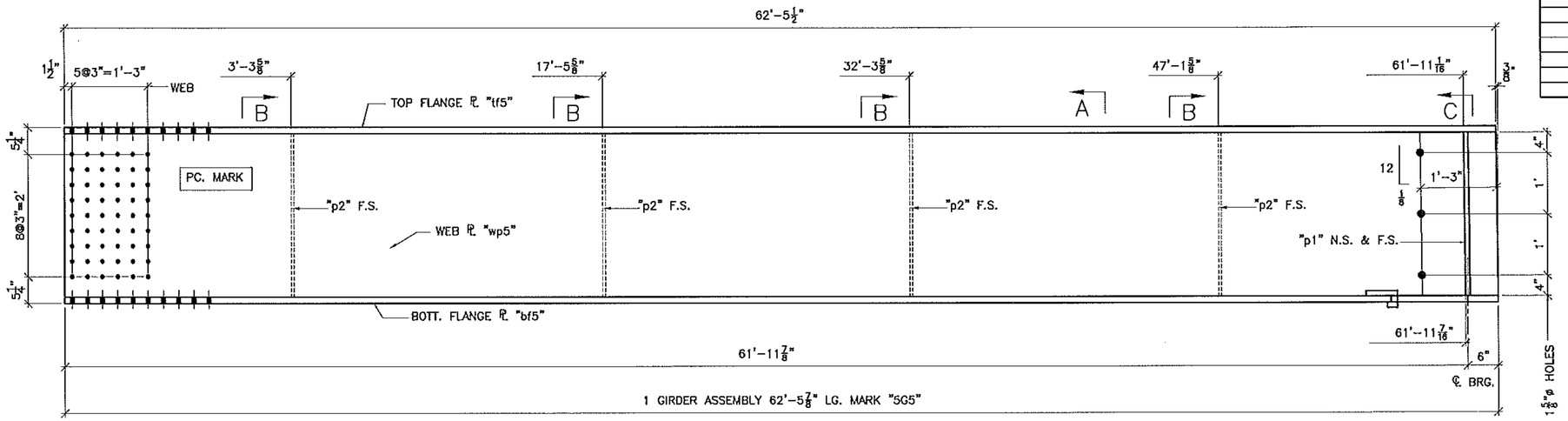


TOP VIEW (BOTTOM VIEW SIM.)



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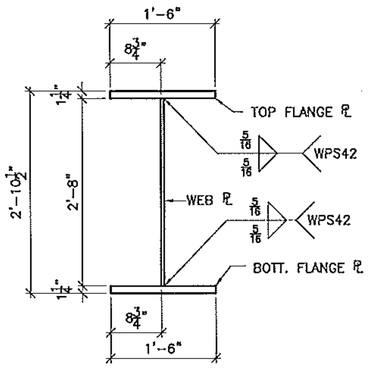
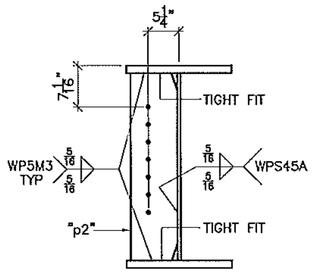
		1	wp5	℄ ½X32	62'-5⅞"		3403
		1	tf5	℄ 1½X18	62'-5½"		4788
		1	bf5	℄ 1½X18	62'-5⅞"		4788
		2	p1	SEE SHT. 26			
		4	p2	SEE SHT. 26			

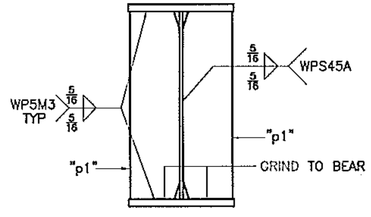
GIRDER WT: 13,253



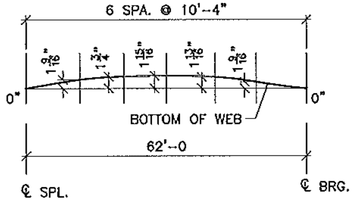
SECTION A
(GIRDER ASS'Y)



SECTION B



SECTION C



CAMBER DIAGRAM

Vermont Agency of Transportation

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05/15/2012

RESUBMIT APPROVED X

BY C. CARLSON DATE 05/16/2012

SEE .dxf FILES FOR WEB ℄ CUTTING

SEE SHEET 26 FOR PIECE DETAILS

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FINISH				
MATERIAL AASHTO M270 (ASTM A709) GRADE 50				
HOLES 15/16"ø U.O.N.				
ELECTRODES				
WELDS PER WPS				
SURFACE PREP	1	5/15/12	PER APPROVAL	JAC
	NO	DATE	DESCRIPTION	BY
	REVISIONS			

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DRAFTER	JAC	STRINGER DETAILS	CONTRACT NO. BRO 1449 (25)
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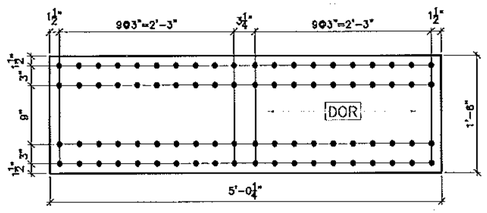
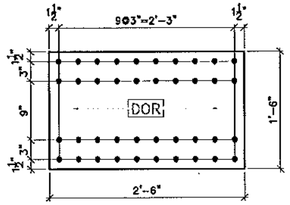
CHECKED	JS	G.C. REED & REED	
JOB #	12-100		

J.A.C. DRAWING/S1512/225

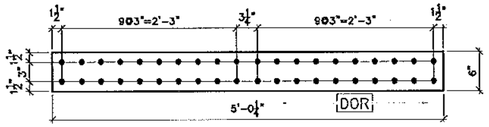
PDF created with FinePrint pdfFactory trial version http://www.pdffactory.com



20 REQ'D, $\frac{3}{4}$" SPLICE PL, MARK "s1"

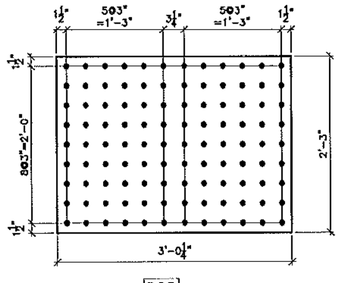


20 REQ'D, 1" FILL PL, MARK "fp1"
10 ARE USED FOR SHOP ASSEMBLY OF SPLICES
10 ARE SHIPPED LOOSE FOR FIELD ASSEMBLY

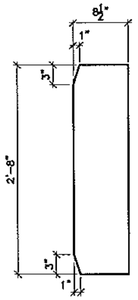


40 REQ'D, $\frac{3}{4}$" SPLICE PL, MARK "s2"

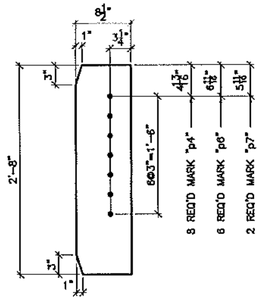
DOR=DIRECTION OF ROLLING



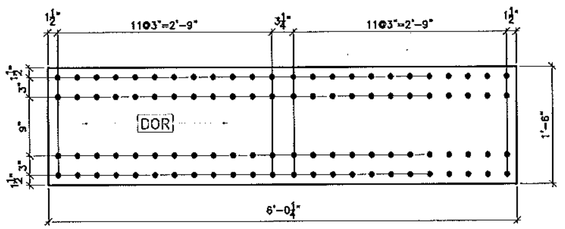
20 REQ'D, $\frac{3}{8}$" SPLICE PL, MARK "s3"



24 REQ'D, $\frac{7}{8}$" STIFF. PL, MARK "p1"



16 REQ'D, $\frac{7}{8}$" CONN. PL



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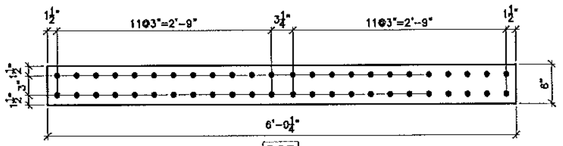
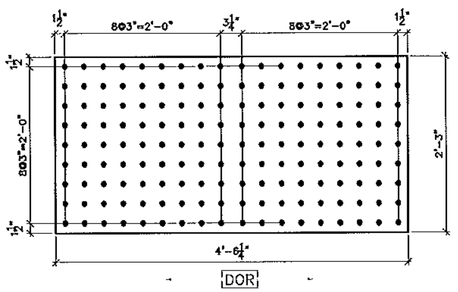
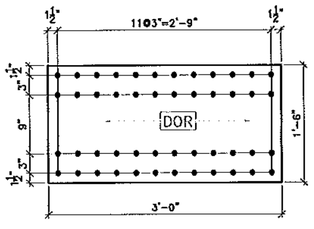


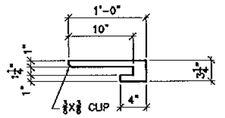
40 REQ'D, 1" SPLICE PL, MARK "s6"



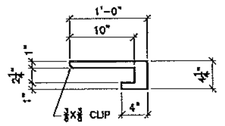
20 REQ'D, $\frac{3}{8}$" SPLICE PL, MARK "s7"



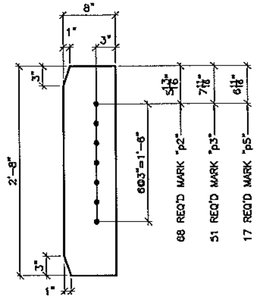
20 REQ'D, $\frac{1}{2}$" FILL PL, MARK "fp2"
10 ARE USED FOR SHOP ASSEMBLY OF SPLICES
10 ARE SHIPPED LOOSE FOR FIELD ASSEMBLY



4 REQ'D, $\frac{1}{4}$" DRIP PL, MARK "dp1"

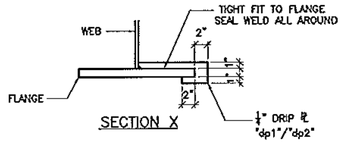


4 REQ'D, $\frac{1}{4}$" DRIP PL, MARK "dp2"

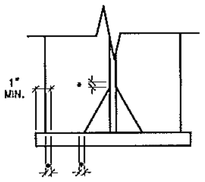


85 REQ'D, $\frac{1}{2}$" CONN. PL

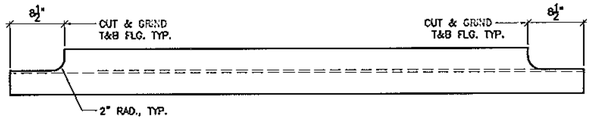
136

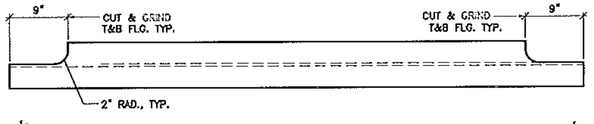


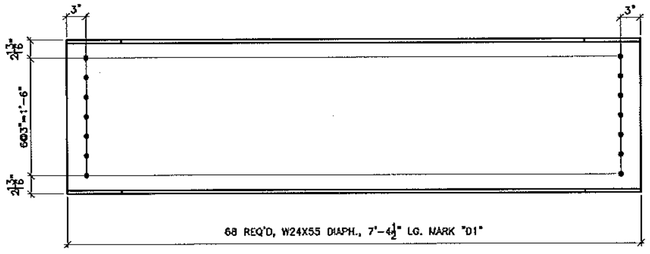
SECTION X



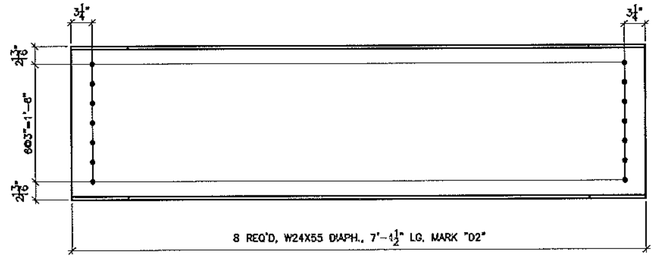
WELD TERMINATION DETAIL
* NO WELD FOR ⅜" MIN. ⅝" MAX.







68 REQ'D, W24X55 DIAPH., 7'-4½" LG. MARK "D1"



8 REQ'D, W24X55 DIAPH., 7'-4½" LG. MARK "D2"

Vermont Agency of Transportation

RECEIVED

CK'D BY GFR OK'D BY

05/15/2012

RESUBMIT APPROVED X

BY C. CARLSON DATE 05/16/2012

BILL OF MATERIAL

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	REMARKS	WT.
		20	s1	PL ¾X18	5'-0½		4229
		40	s2	PL ¾X6	5'-0½		2819
		20	s3	PL ⅜X27	3'-0½		2081
		20	s5	PL 1X18	6'-0½		7376
		40	s6	PL 1X6	6'-0½		4918
		20	s7	PL ⅜X27	4'-6½		3116
		20	fp1	PL 1X18	2'-6		3063
				(10 FOR GIRDER ASS'Y, 10 SHIP LOOSE)			
		20	fp2	PL ½X18	3'-0		919
				(10 FOR GIRDER ASS'Y, 10 SHIP LOOSE)			
		40	SEE DETAILS	PL ½X8½	2'-8		2700
	13/11	85	SEE DETAILS	PL ½X8	2'-8		3066
		4	dp1	PL ¼X3½	1'-0		5
		4	dp2	PL ¼X4½	1'-0		6
	D1	68		W24X55	7'-4½		27583
	D2	8		W24X55	7'-4½		3245

FINISH					
MATERIAL	ASTM A709 GRADE 50				
HOLES	15/16"ø U.O.N.				
ELECTRODES					
WELDS	PER WPS				
SURFACE PREP		1	5/15/12	PER APPROVAL	JAC
		NO	DATE	DESCRIPTION	BY
		REVISIONS			

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DRAFTER	JAC	MISC. DETAILS	CONTRACT NO.
DATE	4/11/12	VERMONT AGENCY OF TRANSPORTATION, NEWPORT CITY, CO. OF ORLEANS	BRO 1449 (25)
CHECKED	JS	RAILROAD SQUARE, TH11 (CLASS 2) MAJOR COLLECTOR, BRIDGE NO. 9	DWG. NO.
JOB #	12-100	CUSTOMER: REED & REED	26

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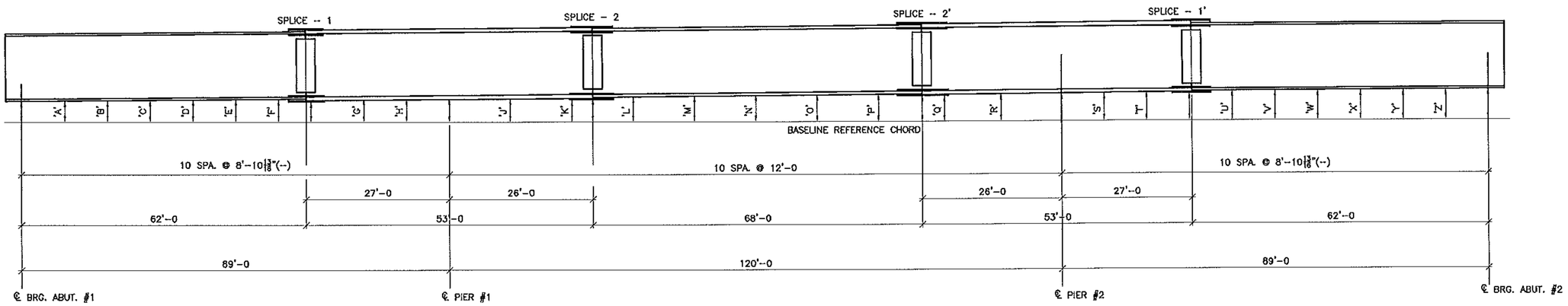


BLOCKING DIAGRAM, SEE CHART

ALL DIMENSIONS ARE MEASURED TO OUTSIDE OF BOTTOM FLANGE ONLY

GIRDER LINE	℄ BRG. ABUT. #1	'A'	'B'	'C'	'D'	'E'	'F'	SPLICE–1	'G'	'H'	℄ PIER #1	'J'	'K'	SPLICE–2	'L'	'M'	'N'	'O'	'P'	SPLICE–2'	'Q'	'R'	℄ PIER #2	'S'	'T'	SPLICE–1'	'U'	'V'	'W'	'X'	'Y'	'Z'	℄ BRG. ABUT. #2
G1–G5	1'–0"	1'–4 1/4"	1'–7 7/16"	1'–10 1/2"	2'–1 7/16"	2'–4 1/8"	2'–6 11/16"	2'–7 1/8"	2'–9 3/8"	2'–11 5/8"	3'–0 1/16"	3'–3 3/8"	3'–5 5/16"	3'–5 7/8"	3'–7 15/16"	3'–9 3/8"	3'–10 5/16"	3'–11 7/16"	4'–0 1/16"	3'–11 3/4"	3'–11 3/4"	3'–11 7/16"	3'–10 3/8"	3'–11 3/8"	3'–10 11/16"	3'–9 15/16"	3'–11"	3'–9 15/16"	3'–8 3/4"	3'–7 3/8"	3'–5 3/4"	3'–4 1/16"	3'–1 5/16"

COATING SYSTEM: NEPCOAT LIST "A"

PRIMER – CARBOZINC 11HS INORGANIC ZINC PRIMER, 2-5 MILS DFT
INTERMEDIATE – CARBOGUARD 893 EPOXY INTERMEDIATE, 3-5 MILS DFT
TOP COAT – CARBOTHANE 133 LH ALIPHATIC POLYURETHANE, 3-6 MILS DFT
COLOR CHIP #27033

GENERAL NOTES;

ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO STATE OF VERMONT AGENCY OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2006, AND IT'S LATEST REVISIONS, AND THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 5TH EDITION AND IT'S LATEST REVISIONS.

ALL MATERIAL SHALL CONFORM TO AASHTO M270 (ASTM A709) GRADE 50. ALL 709 GRADE 50 MATERIAL SHALL MEET THE CHARPY V-NOTCH TESTING REQUIREMENTS OF ZONE 2, H FREQUENCY; 15 FT.-LB AT 40° F. NDT MUST BE ACCORDING TO ANSI/AASHTO/AWS D1.5, SECTION 6

ALL BOLTS SHALL BE ¾"ø CONFORMING TO ASTM A325 WITH RO-CAP TESTING AND MECHANICALLY GALVANIZED.

Vermont Agency of Transportation

RECEIVED

CK'D BY GFR OK'D BY

05/15/2012

RESUBMIT APPROVED X

BY C. CARLSON DATE 05/16/2012

FINISH					
MATERIAL	SEE DETAIL SHEETS				
HOLES					
ELECTRODES					
WELDS	PER WPS				
SURFACE PREP	SSPC SP6/NACE3	1	5/15/12	PER APPROVAL	JAC
		NO	DATE	DESCRIPTION	BY
		REVISIONS			

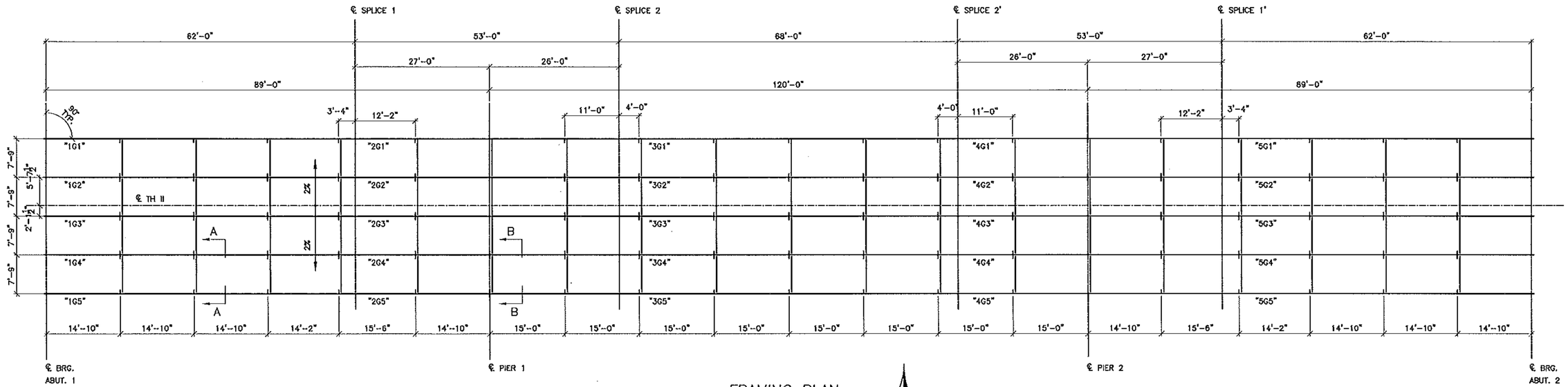
ARC ENTERPRISES, INC.

ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2646 – FAX: (207) 265-4054

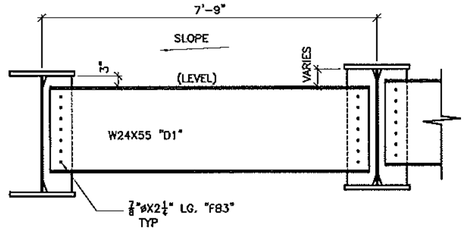
DRAFTER JAC	BLOCKING DIAGRAM	CONTRACT NO.
DATE 4/17/12	VERMONT AGENCY OF TRANSPORTATION, NEWPORT CITY, CO. OF ORLEANS	BRO 1449 (25)
CHECKED JS	RAILROAD SQUARE, TH11 (CLASS 2) MAJOR COLLECTOR, BRIDGE NO. 9	DWG. NO.
JOB# 12-100	CUSTOMER: REED & REED	B1

J:\A.C. DRAFTING/S15B12/B1

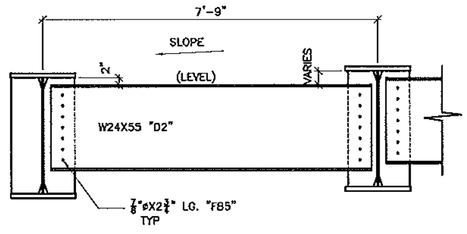
PDF created with FinePrint pdfFactory trial version http://www.pdffactory.com



FRAMING PLAN



TYPICAL INTERMEDIATE DIAPHRAGM (SECTION A–A)



TYPICAL PIER DIAPHRAGM (SECTION B--B)

FIELD BOLT LIST (ALL BOLTS HAVE 1N&1W EACH)

BOLTS: A325 MECH. GALV. WITH RO-CAP TESTING

MARK	QTY.	DESCRIPTION	LOCATION
FB3	952	⅞"øX2¼	DIAPH. "D1" TO CONN. PL
FB5	112	⅞"øX2¾	DIAPH. "D2" TO CONN. PL
FB5	2700	⅞"øX2¾	WEB SPLICE
FB14	1600	⅞"øX5	SPLICE #1 FLANGE
FB16	1920	⅞"øX5½	SPLICE #2 FLANGE

Vermont Agency of Transportation

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CK'D BY GFR OK'D BY

05/15/2012

RESUBMIT APPROVED X

BY C. CARLSON DATE 05/16/2012

FINISH					
MATERIAL	SEE DETAIL SHEETS				
HOLES					
ELECTRODES					
WELDS	PER WPS				
SURFACE PREP		1	5/15/12	PER APPROVAL	JAC
		NO	DATE	DESCRIPTION	BY
		REVISIONS			

ARC ENTERPRISES, INC.

ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2646 -- FAX: (207) 265-4054

DRAFTER	JAC	FRAMING PLAN	CONTRACT NO. BRO 1449 (25)
DATE	2/28/12	VERMONT AGENCY OF TRANSPORTATION, NEWPORT CITY, ORLEANS CO	
CHECKED	MTD	RAILROAD SQUARE, TH II (CLASS 2) MAJOR COLL. BRIDGE NO 9	DWG. NO. E1
JOB#	12-100	REED & REED	

JAC. DRAFTING/S15B12/1

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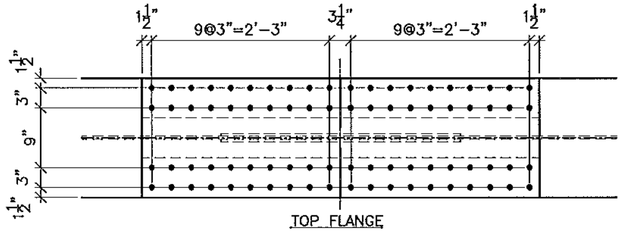
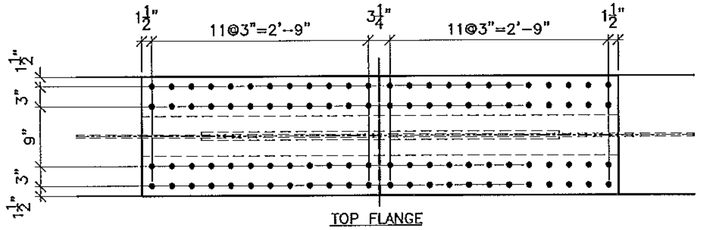
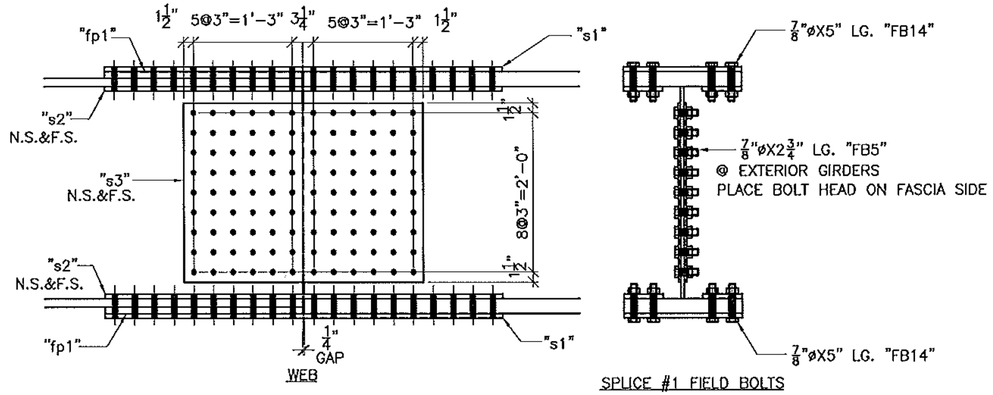


TOP FLANGE

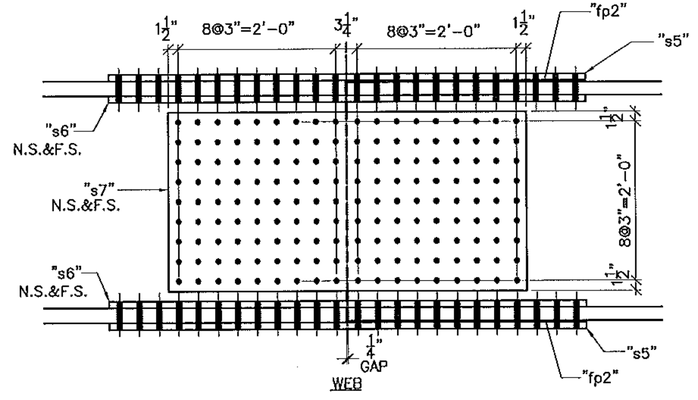


TOP FLANGE

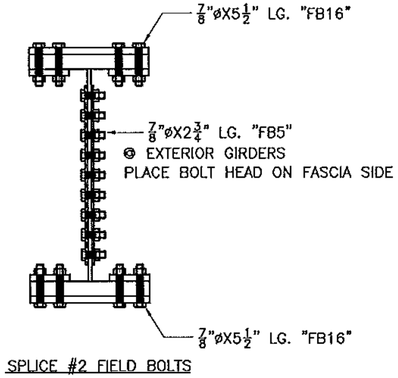


WEB

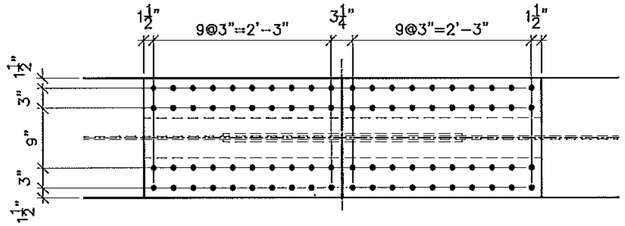
SPLICE #1 FIELD BOLTS



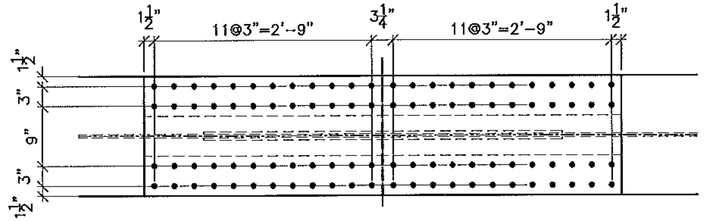
WEB



SPLICE #2 FIELD BOLTS



BOTTOM FLANGE



BOTTOM FLANGE

TYPICAL FIELD SPLICE #1
TYPICAL FIELD SPLICE #1', OPP. HAND

TYPICAL FIELD SPLICE #2
TYPICAL FIELD SPLICE #2', OPP. HAND

Vermont Agency of Transportation

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CK'D BY GFR OK'D BY

05/15/2012

RESUBMIT APPROVED X

BY C. CARLSON DATE 05/16/2012

FINISH					
MATERIAL	SEE DETAIL SHEETS				
HOLES					
ELECTRODES					
WELDS	PER WPS				
SURFACE PREP	SSPC SP6/NACE3				
		NO	DATE	DESCRIPTION	BY
		REVISIONS			

ARC ENTERPRISES, INC.
ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2648 – FAX: (207) 265-4054

DRAFTER JAC	ERECTION DETAILS (FIELD SPLICE)	CONTRACT NO.
DATE 2/28/12	VERMONT AGENCY OF TRANSPORTATION, NEWPORT CITY, ORLEANS CO.	BRO 1449 (25)
CHECKED JS	RAILROAD SQUARE, TH II (CLASS 2) MAJOR COLL. BRIDGE NO. 9	DWG. NO.
JOB# 12-100	CUSTOMER: REED & REED	E2

J.A.C. DRAFTING/S15B10/3

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VERMONT

State of Vermont
PDD/Structures Design Section
National Life Building – Drawer 33
Montpelier, VT 05633-5001
www.aot.state.vt.us

[phone] 802-828-2621
[fax] 802-828-3566
[ttd] 800-253-0191

Agency of Transportation

May 16, 2012

ARC Enterprises, INC.
P.O. Box 120
Kingfield, Maine 04947

Project Name: Newport City **Project #:** BRO 1449(25)

Structure Identification: TH 11 over the South Bay of Lake Memphremagog

The following Structural Steel details **[Item # 506.55, (Structural Steel Details, Plate Girder]** for the above project (Vendor's Job # 12-100) transmitted via email by Reed and Reed, Inc. and received May 15, 2012 have been reviewed and are being returned herewith.

Sheets: E1, E2, B1, Sheets 1-26 and Welding Procedures **are approved [X]**

Please submit extended weights for our approval. **Partial payment for this item will be withheld until extended weights are received and approved.**

You must provide notice to our fabrication inspector, Jeff Clark, as to the date fabrication represented by these drawings will begin. Jeff must receive and acknowledge your notice at least seven days prior to that date, as per Specification 506.03. You may contact Jeff by phone at (802) 828-0044 or email at jeff.clark@state.vt.us. Any material fabricated prior to the notification date is subject to rejection without further cause.

Sincerely,

Carolyn W. Carlson

Carolyn W. Carlson, PE
Structures Project Manager

Attachments

cc: [X] Chris Craig, Resident Engineer – w/Prints
[X] Jeff Clark, Shop Inspector – w/Prints
[X] Reed & Reed, Inc. Contractor – w/Prints
[X] Construction Division – letter only
[X] Materials & Research Section (C&IA Unit) – letter only
[X] Files

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Vermont Agency of Transportation

Aliquippa, PA

NDE • MECHANICAL LAB • FIELD SERVICES www.nondestructivetesting.com

TÜVRheinland® NDT NON-DESTRUCTIVE TESTING SERVICES

Vermont Agency of Transportation

RECEIVED

CK'D BY David Peterson OK'D BY JWC

Apr 26, 2012

RESUBMIT ____ APPROVED ✓

BY C. CARLSON DATE 5/7/12

ARC Enterprise
Steve Howard
27 Commercial Road
P.O. Box 120
Kingfield, ME 04947

Date: April 26, 2010

Report #: 1
P.O. #: 5062
Lab #: 100275
Date Received: 4/23/10
Date Tested: 4/26/10
Work Order: G5513

WELDING PROCEDURE QUALIFICATION RECORD (WQR) 45

Fabricator: ARC Enterprises, Inc.
Welding Process (es): SAW
Welding Position: 1G
Electrode: Lincoln LA-75
Flux Mfg. Designation: 960

Date Welded: 4-14-10
# of Passes: 18
Filler Metal Specification:
Filler Metal Classification:

Types: ☐ Manual ☐ Automatic ☐ Semi-Auto

Electrode	Diameter	Current	WFS*	Volts	Current	Polarity
1	3/32"	400	N/A	30	DC	Positive

Shielding Gas: N/A
Flow Rate: N/A
Dew Point: N/A
Preheat Temp: 75°
Interpass Temp: 450° F maximum
Material Specification: A709 Gr 50W
Material Thickness: 1"
Welding Witnessed By:
Welded By: Jim Gentile

SPECIMEN	TEST RESULTS
ALL WELD METAL TENSION (AWMT)	Tensile Strength (psi): 84,000 Yield Strength (psi): 68,000 Elongation in 2" (%): 29 Reduction in Area (%): 67
SIDE BENDS	1. Pass 2. Pass 3. Pass 4. Pass
REDUCED SECTION TENSION	Tensile Strength 1: 89,000 Location of Break 1: Base metal Tensile Strength 2: 66,500 Location of Break 2: Base Metal
CHARPY IMPACT (WELD METAL)	Charpy 1: 59 44 54 55 55 Avg. Ft-Lb: 54.7 @ 0° F Charpy 2: Avg. Ft-Lb:
CHEMISTRY ELEMENTS	C Cr Mn Mo Ni S Cu Si P V
MACROETCH	1. Acceptable 2. Acceptable 3. Acceptable

RADIOGRAPHIC TEST RESULTS

Film I.D.	Results	Remarks	Film I.D.	Results	Remarks
N/A					

Per Inspector: J. Pete Merther, P.E.
Testing witnessed by: N/A
Does meet the requirements of AWS D1.5 – 2008

Process date: 4/26/10
Witness date: N/A

Frank M Adragna
CWI 91060621
QC1 EXP. 6/1/2012

Respectfully submitted,

Non-Destructive Testing Services, Inc.

RECEIVED
APR 30 2010

Testing was performed in accordance with accepted industry practice as well as the test methods referenced. Non-Destructive Testing Services, Inc. has no direct knowledge of the origin, sampling procedure, nor condition of the samples, and makes no claims as to the suitability nor final use of the material. This test report applies only to those items tested. This report shall not be reported except in full without the written consent of Non-Destructive Testing Services, Inc.

PQR AWS D1.5 Fracture Critical NYSSCM & NYCDOT
RLK 7/13/09

WELDING PROCEDURE SPECIFICATION (WPS) YES (X)
PREQUALIFIED ____ QUALIFIED BY TESTING ____(X)___
or PROCEDURE QUALIFICATION RECORD (PQR) YES (x)

Company Name A.R.C. Enf. Inc.
Welding Process(es) SAW
Supporting PQR No.(s) ARC - PQR - 42

Identification # ARC WPS #42
Revision ____ Date ____ By ____
Autherized by STEVE HOWARD Date 3/10/2010
Type - Manual Semi - Automatic ( )
Machine ( ) Automatic (X)

JOINT DESIGN USED
Type FILLET
Single (X) Double Weld ( )
Backing ( ) NO (X)
Backing Material
Root Opening ____ Root Face Dimension ____
Groove Angle ____ Radius (J-U) ____
Back Gouging Method ____

BASE METALS
Material Spec A709
Type or Grade 36 50 50W
Thickness Groove ____ Fillet UNLIMITED
Diameter (Pipe)

FILLER METALS Lincoln I-61
AWS Specification A 5.23 A 5.17
AWS Classification EM12K

SHIELDING
Flux LINCOLN 960 Gas
Composition
Electrode - Flux (Class) Flow Rate
F7A2-EM12K Gas Cup Size

PREHEAT: 70 degrees MAX INTERPASS 450 DEGREES

POSITION
Position of Groove ____ Fillet 1F 2F
Vertical Progression ( )

ELECTRICAL CHARACTERISTICS
Transfer Mode (FCAW) Short Circuiting ( )
Globular ( ) Spray (X)
Current : AC ( ) DCEP DCEN (X)
Pulsed ( )
OTHER :

TECHNIQUE
Stringer or Weave Bead STRINGER
Multi-pass or Single Pass (per side) SINGLE
Number of Electrodes -1
Electrode Spacing Longitudinal
Lateral
Angle
Contact Tube to Work Distance 1"1/4 STICKOUT +/_1/4"
Peening
Interpass Cleaning : hand and power tools

POSTWELD HEAT TREATMENT
Temp
Time

WELDING PROCEDURE

Pass or Weld Layer(s)	S	Filler Metals		Current		Volts	Travel Speed	Joint Details
		Class	Diameter	Type & Polartiy	Amps or Wire Feed Speed			
	5-16	EM12K	5/32	DCEN	540-660	30.7-35.3	16.6-22.4	

Steve Howard

Vermont Agency of Transportation
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CK'D BY David Peterson OK'D BY JWC
Apr 26, 2012
RESUBMIT ____ APPROVED ✓
BY C. CARLSON DATE 5/7/12

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
☐ REVIEWED ☐ REVIEWED WITH COMMENTS
☐ REJECTED ☐ RETURNED FOR CORRECTIONS

AUG 10 2010

THIS DOCUMENT WAS REVIEWED FOR CONFORMANCE WITH STATE OF MAINE SPECIFICATIONS ONLY. CONTRACTOR IS RESPONSIBLE FOR CORRECTNESS OF WORKMANSHIP, MATERIALS AND DIMENSIONS.

AASHTO/AWS D1.5/D1.5M:2008

PROCEDURE QUALIFICATION RECORD

PQR NUMBER 42 *(Include PQR Number on All Supporting Documents)*

Welder's Name James Gentile ID 1 Welding Test Date 3-10-10

Process SAW Position 2F Joint Detail: ☐ Fig. 5.1 ☐ Fig. 5.2 ☐ Fig. 5.3 ☒ Fig. 5.6

Backing Yes AWS Electrode Classification F11A2-EM12K Electrical Stick Out 1.5"

Flux Mig. Designation Lincoln 960 AWS Flux Classification F11A2-EM12K

Postweld Heat Treatment: Temp. _____ Hold Time _____ Heating/Cooling Rate _____

	Diam.	Current	WFS*	Voltage	Current and Polarity
Electrode (1)	3/32	600 SAW		33	DCEN
(2)					
(3)					

Calculated Heat Input (see 5.12) _____

Shielding Gas _____ Dew Point _____ Flow Rate _____ Gas Cup Size _____

Travel Speed: Min. 19.3 Max. _____

Base Metal Specification and Thickness A709 Gr 50W 1" Heat Number _____

Backing Metal Specification and Thickness _____ Heat Number _____

Base Metal Carbon Equivalent (see 5.4.2) _____

(Attach Copy of Certified Mill Test Report for Base and Backing Materials)

Preheat Temp. 70° Interpass Temp. Min. 70° Max. 450°

SPECIMEN — TEST RESULTS

All Weld Metal Tension (AWMT) ☐ ksi ☐ MPa — Tensile Strength _____ Yield Strength _____ Elongation in 50 mm [2 in] (%) _____ Reduction in Area % _____

Visual Inspection: ☒ Acceptable ☐ Unacceptable **Macro Test: ☐ Acceptable ☐ Unacceptable

Side Bends 1. _____ 2. _____ 3. _____ 4. _____

Reduced Section Tension ☐ ksi ☐ MPa — Tension Strength 1. _____ 2. _____ Location of Break 1. _____ 2. _____

Charpy V-Notch Impact Toughness of Weld Metal (_____ , _____ , _____ , _____ , _____)

SMAW, SAW, FCAW, GMAW—5 Req'd. ESW and EGW—8 Req'd. *Avg. ☐ ft-lbs. ☐ J _____ @ _____ ☐ °F ☐ [°C]

*Discard the highest and lowest values and average the 3 remaining.

**Chemistry of Deposited Weld Metal When Required by Contract Documents* C _____ Mn _____ Si _____ P _____ S _____ Ni _____ Cr _____ Mo _____ V _____ Cu _____

Radiographic Test: ☐ Acceptable ☐ Unacceptable Remarks: _____

Fillet Weld Soundness — Maximum Size Single Pass: 5/16 1. O.K 2. O.K 3. O.K

Macroetch — Maximum Size Single Pass: _____ 1. _____ 2. _____ 3. _____

We, the undersigned, certify that the above described WPQR/FWS has been qualified in accordance with Clause 5 of the AASHTO/AWS D1.5M/D1.5, (2008 (year)) *Bridge Welding Code*.

State/3rd Party Witness [signature] Date 3-10-2010

Mfr./Contractor ARC Ent.

Authorized By [signature]

Date 3-10-10

Vermont Agency of Transportation

RECEIVED

CK'D BY David Peterson OK'D BY JWC

Apr 26, 2012

RESUBMIT _____ APPROVED ✓

BY C. CARLSON DATE 5/7/12

Qualification Record (PQR)
st, and Verification Results

262

Robert H Perechenian, Jr.
CWI 90100111
QC1 EXP. 10/1/2014

RHP. 1-26-2012

WELDING PROCEDURE SPECIFICATION (WPS) YES (X)
PREQUALIFIED ____ QUALIFIED BY TESTING ___(X) Fillet weld S. test 1-26-12___
or PROCEDURE QUALIFICATION REGORD (PQR) YES (x)

Company Name ARC Ent.
Welding Process(es) GMAW
Supporting PQR No.(s) 5M3

Identification # ARC WPS 5M3
Revision ____ Date ____ By ____
Autherized by STEVE HOWARD Date 1/26/2012
Type - Manual ____ Semi - Automatic (X)
Machine ( ) Automatic ( )

JOINT DESIGN USED
Type Fillet
Single (X) Double Weld ( )
Backing ( ) NO (X)
Backing Material ____
Root Opening 0 Root Face Dimension NA
Groove Angle NA Radius (J-U) ____
Back Gouging NA Method ____

BASE METALS
Material Spec A709
Type or Grade 36 50 50W
Thickness Groove ____ Fillet unlimited
Diameter (Pipe) ____

FILLER METALS
AWS Specification A 5.18
AWS Classification ER70S-6 Lincoln SuperArc L-56

SHIELDING
Flux ____ Gas AR2
Composition argon-98 oxygen-2
Electrode - Flux (Class) ____ Flow Rate 25-40 cfh
Gas Cup Size 5/8"

Preheat : T < 3/4" = 50 degrees F. 3/4"- 1 1/2" = 70 degrees F.
if steel temp < 15 degrees F. T < 3/4" = 70 degrees F.

POSITION
Position of Groove ____ Fillet 1F 2F
Vertical Progression ( )

ELECTRICAL CHARACTERISTICS
Transfer Mode (FCAW) Short Circuiting ( )
Globular ( ) Spray (X)
Current : AC ( ) DCEP (X) DCEN ( )
Pulsed ( )
OTHER : ____

TECHNIQUE
Stringer or Weave Bead stringer
Multi-pass or Single Pass (per side) single
Number of Electrodes 1
Electrode Spacing Longitudinal ____
Lateral ____
Angle ____
Contact Tube to Work Distance 5/8" - 3/4"
Peening ____
Interpass Cleaning : ____

POSTWELD HEAT TREATMENT
Temp ____
Time ____

WELDING PROCEDURE

Pass or Weld Layer(s)	S	Filler Metals		Current		Volts	Travel Speed	Joint Details
		Class	Diameter	Type & Polarity	Amps or Wire Feed Speed			
1	5/16"	ER70S-6	.035"	DCEP	216-264	25-29	7.6 - 9.6 ipm	5/16 V

Vermont Agency of Transportation
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CK'D BY David Peterson OK'D BY JWC
Apr 26, 2012
RESUBMIT ____ APPROVED ✓
BY C. CARLSON DATE 5/7/12

Steve Howard
Steve Howard

PROCEDURE QUALIFICATION RECORD

PQR NUMBER 5M3 *(Include PQR Number on All Supporting Documents)*

Welder's Name Jason Pinkham ID _____ Welding Test Date 1-26-12

Process GMAW Position 2F horizontal Joint Detail: ☐ Fig. 5.1 ☐ Fig. 5.2 ☐ Fig. 5.3 ☒ Fig. 5.8

Electrode(s) Mfg. Designation Lincoln SuperArc L-56

AWS Electrode Classification ER70S-6 Electrical Stick Out _____

Flux Mfg. Designation _____ AWS Flux Classification _____

Postweld Heat Treatment: Temp. _____ Hold Time _____ Heating/Cooling Rate _____

		Diam.	Current	WFS*	Voltage	Current and Polarity
Electrode	(1)	.035	240		27	DCEP
	(2)					
	(3)					

Calculated Heat Input (see 5.12) _____

Shielding Gas AR-2 Dew Point _____ Flow Rate 30CFH Gas Cup Size 3/8"

Travel Speed: Min. _____ Max. _____

Base Metal Specification and Thickness A709GR50 - 1" Heat Number _____

Backing Metal Specification and Thickness _____ Heat Number _____

Base Metal Carbon Equivalent (see 5.4.2) _____

(Attach Copy of Certified Mill Test Report for Base and Backing Materials)

Preheat Temp. 70° Interpass Temp. Min. _____ Max. _____

SPECIMEN **TEST RESULTS**

All Weld Metal Tension (AWMT). ☐ ksi ☐ MPa — Tensile Strength _____; Yield Strength _____; Elongation in 50 mm [2 in] (%) _____; Reduction in Area % _____

Visual Inspection: ☒ Acceptable ☐ Unacceptable **Macro Test: ☐ Acceptable ☐ Unacceptable

Side Bends 1. _____ 2. _____ 3. _____ 4. _____

Reduced Section Tension ☐ ksi ☐ MPa — Tension Strength 1. _____ 2. _____ Location of Break 1. _____ 2. _____

Charpy V-Notch Impact Toughness of Weld Metal (_____, _____, _____, _____, _____) (_____, _____, _____)
SMAW, SAW, FCAW, GMAW—5 Req'd. ESW and EGW—8 Req'd. [a]Avg. ☐ ft-lbs, ☐ J _____ @ _____ ☐ °F ☐ [°C]
[a]Discard the highest and lowest values and average the 3 remaining.

**Chemistry of Deposited Weld Metal When Required by Contract Documents* C _____ Mn _____ Si _____ P _____ S _____ Ni _____ Cr _____ Mo _____ V _____ Cu _____

Radiographic Test: ☐ Acceptable ☐ Unacceptable Remarks: _____

Fillet Weld Soundness Maximum Size Single Pass: 3/16 1. O.K. 2. O.K. 3. O.K.
Macroetch Maximum Size Single Pass: _____ 1. _____ 2. _____ 3. _____

We, the undersigned, certify that the above described WPQR/FWS has been qualified in accordance with Clause 5 of the AASHTO/AWS D1.5M/D1.5 (2010 (year)) *Bridge Welding Code.*

State/3rd Party Witness _____ Mfr./Contractor ARC Ent.

Date 1-26-2012 Authorized By _____

Agency Results Reviewed _____

Date _____ Date 1-26-12

*Optional **Optional for CJP
Form L-3

Vermont Agency of Transportation
RECEIVED
CK'D BY David Peterson OK'D BY JWC
Apr 26, 2012
RESUBMIT BY C. CARLSON APPROVED DATE 5/7/12

Form L-3—Procedure Qualification Recor for Qualification, Pretest, and Verification

Robert H Parechanian, Jr.
CWI 90100111
QC1 EXP. 10/1/2014

WELDING PROCEDURE SPECIFICATION (WPS) YES (X)
PREQUALIFIED ____ QUALIFIED BY TESTING ____
or PROCEDURE QUALIFICATION RECORD (PQR) YES (x)

Company Name ARC Ent. Inc.
Welding Process(es) SAW
Supporting PQR No.(s) ARC PQR # 45

Identification # ARC WPS 45a
Revision 1 Date 4/17/2012 By SVH
Autherized by STEVE HOWARD Date 3/13/2012
Type - Manual Semi - Automatic ( )
Machine ( ) Automatic (X)

DART Welder

JOINT DESIGN USED
Type FILLET
Single (X) Double Weld ( )
Backing ( ) NO
Backing Material
Root Opening 0 Root Face Dimension
Groove Angle NA Radius (J-U)
Back Gouging Method

BASE METALS
Material Spec A709
Type or Grade 50W
Thickness Groove Fillet U
Diameter (Pipe)

FILLER METALS
AWS Specification A5.23 Lincoln LA-75
AWS Classification ENi1K-Ni1-H8

SHIELDING
Flux 960 Gas
Composition
Electrode - Flux (Class) Flow Rate
F8A2-ENi1K-Ni1 Gas Cup Size

Preheat 75 degrees F.

POSITION
Position of Groove Fillet 1F 2F
Vertical Progression ( )

ELECTRICAL CHARACTERISTICS
Transfer Mode (FCAW) Short Circuiting ( )
Globular ( ) Spray (X)
Current : AC ( ) DCEP (X) DCEN ( )
Pulsed ( )
OTHER :

TECHNIQUE
Stringer or Weave Bead STRINGER
Multi-pass or Single Pass (per side) SINGLE
Number of Electrodes
Electrode Spacing Longitudinal
Lateral
Angle
Contact Tube to Work Distance 1 1/4" Stickout +/- 1/4"
Peening
Interpass Cleaning :

POSTWELD HEAT TREATMENT
Temp
Time

WELDING PROCEDURE

Pass or Weld Layer(s)	S	Filler Metals		Current		Volts	Travel Speed	Joint Details
		Class	Diameter	Type & Polartiy	Amps or Wire Feed Speed			
	SAW	ENi1K	3/32"	DCEN	360-440	28-32	12-16.2 ipm	

Steve Howard

Vermont Agency of Transportation
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Apr 26, 2012
RESUBMIT ____ APPROVED ✓
BY C. CARLSON DATE 5/7/12

PROCEDURE QUALIFICATION RECORD

PQR NUMBER 45 *(Include PQR Number on All Supporting Documents)*

Welder's Name Jim Gentile ID L — Welding Test Date 4-14-10
Process SAW — Position F-1G — Joint Detail: [X] Fig. 5.1 [ ] Fig. 5.2 [ ] Fig. 5.3 [ ] Fig. 5.8
Electrode(s) Mfg. Designation L-A-83
AWS Electrode Classification A5.23 EA3K — Electrical Stick Out 1¼"
Flux Mfg. Designation Lincoln weld 960 — AWS Flux Classification F8A2-EA3K-A3-1-H8
Postweld Heat Treatment: Temp. ____ Hold Time ____ Heating/Cooling Rate ____

		Diam.	Current	WFS*	Voltage	Current and Polarity
Electrode	(1)	3/32	400		30	DCEP
	(2)					
	(3)					

Calculated Heat Input (see 5.12) 57 KJ/in
Shielding Gas NA — Dew Point ____ — Flow Rate ____ — Gas Cup Size ____
Travel Speed: Min. 14.1 Max. ____
Base Metal Specification and Thickness G50W — Heat Number 910438
Backing Metal Specification and Thickness G50W — Heat Number 910368B
Base Metal Carbon Equivalent (see 5.4.2) ____
(Attach Copy of Certified Mill Test Report for Base and Backing Materials)
Preheat Temp. 75° — Interpass Temp. Min. 70° Max. 450°

SPECIMEN	TEST RESULTS
All Weld Metal Tension (AWMT) [ ] ksi [ ] MPa	Tensile Strength 84,000
	Yield Strength 68,000
	Elongation in 50 mm [2 in] (%) 29
	Reduction in Area % 67
Visual Inspection: [X] Acceptable [ ] Unacceptable	**Macro Test: [X] Acceptable [ ] Unacceptable
Side Bends	1. Pass 2. Pass 3. Pass 4. Pass
Reduced Section Tension [ ] ksi [ ] MPa	Tension Strength 1. 89,000 2. 66,500 — Location of Break 1. Base metal 2. Base metal
Charpy V-Notch Impact Toughness of Weld Metal SMAW, SAW, FCAW, GMAW—5 Req'd. ESW and EGW—8 Req'd.	(59, 44, 34, 33, 30) (, ,) [a]Avg. [X] ft-lbs, [ ] J 34.7 @ 0° [X] °F [ ] [°C]
	[a]*Discard the highest and lowest values and average the 3 remaining.*
**Chemistry of Deposited Weld Metal When Required by Contract Documents*	C ____ Mn ____ Si ____ P ____ S ____ Ni ____ Cr ____ Mo ____ V ____ Cu ____
Radiographic Test: [X] Acceptable [ ] Unacceptable	Remarks: ____
Fillet Weld Soundness	Maximum Size Single Pass: ____ 1. ____ 2. ____ 3. ____
Macroetch	Maximum Size Single Pass: ____ 1. ____ 2. ____ 3. ____

We, the undersigned, certify that the above described WPQR/FWS has been qualified in accordance with Clause 5 of the AASHTO/AWS D1.5M/D1.5, (2008) (year) *Bridge Welding Code.*

State/3rd Party Witness ____ — Mfr./Contractor ARC Ent.
Date ____ — Authorized By Steve Howard
Agency Results Reviewed ____ — Date 5-18-10
Date ____

Vermont Agency of Transportation
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Apr 26, 2012
RESUBMIT ____ APPROVED ✓
BY C. CARLSON DATE 5/7/12

Form L-3—Procedure Qualification Record (PQR) for Qualification, Pretest, and Verification Results

PROCEDURE QUALIFICATION RECORD WORKSHEET

PQR NUMBER 43

Welder's Name Jim Gentile ID L
Process SAW Position F/1G
Electrode(s) Mfg. Designation LA-75
AWS Electrode Classification A5.23 ENiK
Flux Mfg. Designation 960
Postweld Heat Treatment: Temp. _____ Hold Time _____

Welding Test Date 4-14-10
Joint Detail: [X] Fig. 5.1 [ ] Fig. 5.2 [ ] Fig. 5.3 [ ] Fig. 5.8
Electrical Stick Out _____
AWS Flux Classification F8A2-EN1K-N1-H8
Heating/Cooling Rate _____

		Diam.	Current	WFS*	Voltage	Current and Polarity
Electrode	(1)	3/32	400		30	DCEP
	(2)					
	(3)					

Shielding Gas N/A Dew Point _____ Flow Rate _____ Gas Cup Size _____
Travel Speed: Min. _____ Max. _____
Base Metal Specification and Thickness 50W 1"
Backing Metal Specification and Thickness 50W 1/2"
Preheat Temp. 75

Heat Number 9104138
Heat Number 9103608
Interpass Temp. Min. _____ Max. 450°

Pass Number	Layer	Process	FILLER METAL Diam.	CURRENT Type & Polarity	CURRENT Wire Feed Speed	CURRENT Amp	CURRENT Volts	CURRENT Travel Speed	CURRENT Stick Out	TEMPERATURE Preheat	TEMPERATURE Interpass
1		SAW	3/32	DCEP		400	30	14.1	1¼	75°	450°
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											450°

*Optional
Page _____ of _____

For multiple electrodes list each electrode on separate line. For parallel electrodes show "2 @ _____" under number and diameter.
Preheat and interpass temperature measured at mid length of plates approximately 25 mm [1 in] from the weld center line.

State/3rd Party Witness _____
Date _____
Mfr./Contractor ARC End.

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BY C. CARLSON DATE 5/7/12

edure Qualification Record (PQR) Worksheet

Aliquippa, PA

NDE • MECHANICAL LAB • FIELD SERVICES www.nondestructivetesting.com

TÜVRheinland® NDT NON-DESTRUCTIVE TESTING SERVICES

RADIOGRAPHIC INSPECTION OF WELDS REPORT

ARC Enterprise
Steve Howard
27 Commercial Road
P.O. Box 120
Kingfield, ME 04947
Date: April 23, 2010

Report #: 1 Page 1 of 1
P.O. #: 5062
Work Order #: G5758
Project: PQR Test Plate
Lab #: 077004214
Welder:

MAY - 7 2012

FILM INTERPRETATION

Test Method Standard: NDTG-RT-2 Acceptance Standard: AWS D1.5-2008

Drawing # N/A Viewing – Check One [X] Single Wall [ ] Double Wall

Film View	Acceptable	Rejectable	Incomplete Fusion	Incomplete Penetration	Crack	Slag Inclusion	Tungsten Inclusion	Porosity	Undercut	Surface Condition	Film Artifact	Remarks
PQR 45												
A-B	/											
B-C	/											

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Apr 26, 2012
RESUBMIT APPROVED ✓
BY C. CARLSON DATE 5/7/12

Radiographer: Ivan Winkler Level: II

Interpreter: Ivan Winkler Level: II

Date Radiographed:	4-22-10
Source:	IR-192
Pipe Size:	N/A
Nominal Wall:	1"
Reinforcement:	N/A
Backing Ring:	.5"
Total Thickness:	1.5"
Curies or MA:	65 Curies
Max. Effective Focal Spot Size:	.150"
S-O Distance:	24"
Unsharpness:	< .020
Penetrameter:	20 pen
Shim Thickness:	N/A
Sensitivity:	2T, 4T
Exposure Time:	12 Minutes
Lead Backup:	N/A
Screens:	.010Pb x .010 Pb
Film Size:	7" x 17"
Film Type:	Fuji 80
Number Films:	2 per weld
Density Range:	2.0 – 3.2
Type of Material:	Carbon Steel

Technique:

[X] Single Wall
[ ] Double Wall
[ ] Contact
[ ] Panoramic
[ ] Elliptical
[ ] Super Imposed
[ ] Approx. Angle Beam

Reviewed By: Dustin Robertson Date: 4/23/10

Testing was performed in accordance with accepted industry practice as well as the test methods referenced. This test report applies only to those items tested.
This report shall not be reproduced except in full without the written consent of Non-Destructive Testing Services, Inc.

100 INDUSTRIAL BOULEVARD • ALIQUIPPA, PA 15001 • TELEPHONE (724)-378-3900 • FAX (724)-378-3940

VERMONT

State of Vermont
PDD/Structures Design Section
National Life Building – Drawer 33 [phone] 802-828-2621
Montpelier, VT 05633-5001 [fax] 802-828-3566
www.aot.state.vt.us [ttd] 800-253-0191

Agency of Transportation

DATE: June 1, 2012

Elderlee, Inc.
729 Cross Road
Oaks Corners, NY 14518

Project Name: Newport City **Project #:** BRO 1449(25)

Structure Identification: Bridge #9 over the South Bay of Lake Memphremagog

The following **Item 900.640, Special Provision (Box Beam Guardrail, Painted)** details and welding procedures for the above project (Item # 900.640-Guardrail), transmitted and received by our office on May 22, 2012 have been reviewed and are being returned herewith.

Sheets: 2 of 4 and 4 of 4 **are approved [X]**

Sheets: 1 of 4 and 3 of 4 **are approved [As Noted]**

Welding Procedures are also approved.

There shall be no fabrication done until all drawings and welding procedures are approved. You must provide notice to our fabrication inspector, Jeff Clark, as to the date fabrication represented by these drawings will begin. That notice must be received and acknowledged at least seven days prior to that date, as per Specification 506.03. Jeff may be contacted by phone at (802)828-0044 or email at jeff.clark@state.vt.us. Any material fabricated prior to the notification date is subject to rejection without further cause.

Sincerely,

Carolyn W. Carlson, PE
Structures Project Manager

Attachments
cc: [x] Resident Engineer w/prints Chris Craig
[x] Shop Inspector w/prints Jeff Clark
[x] Contractor w/prints Reed & Reed Inc.
[x] Sub-Contractor w/prints F R LaFayette
[x] Construction Division – letter only
[x] Materials & Research Section (C&IA Unit) – letter only
[x] Files (Structures & Central)

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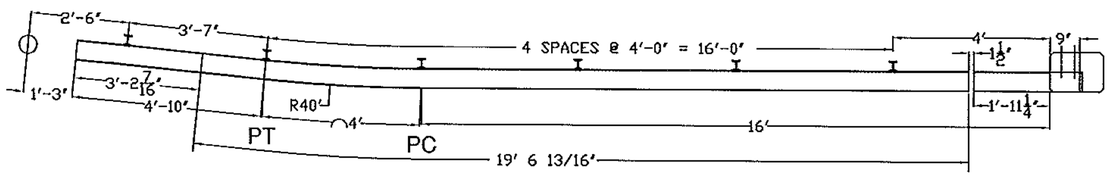
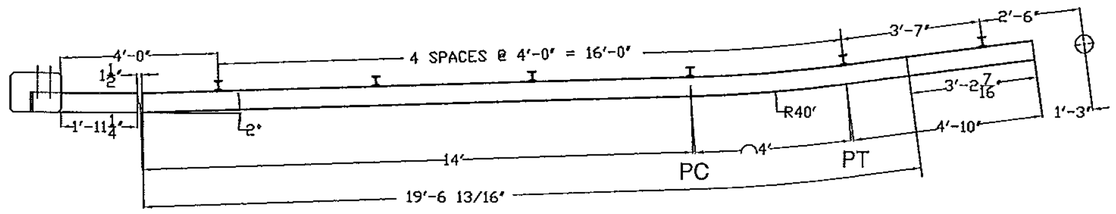
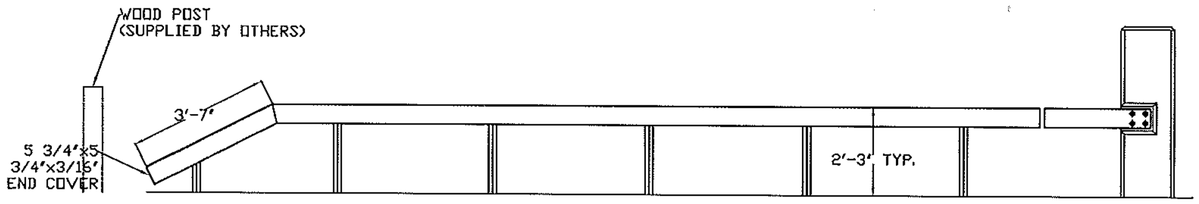
Vermont Agency of Transportation

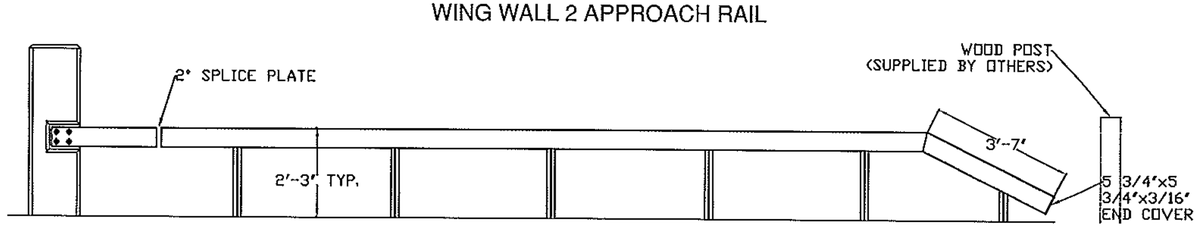


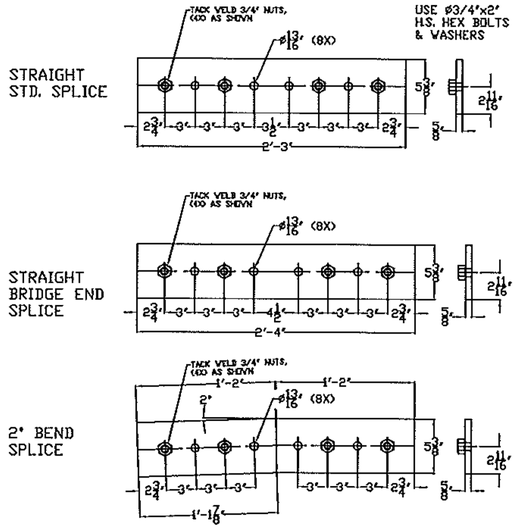
WING WALL 1 APPROACH RAIL

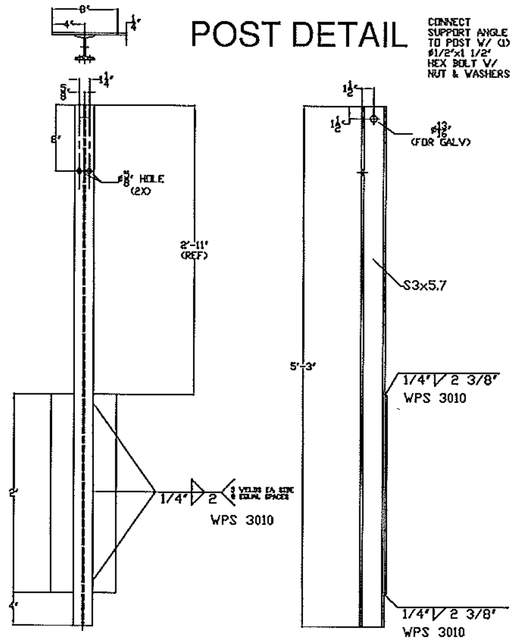


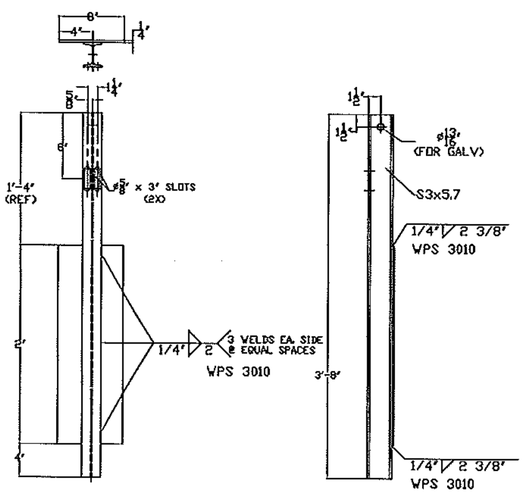
WING WALL 2 APPROACH RAIL



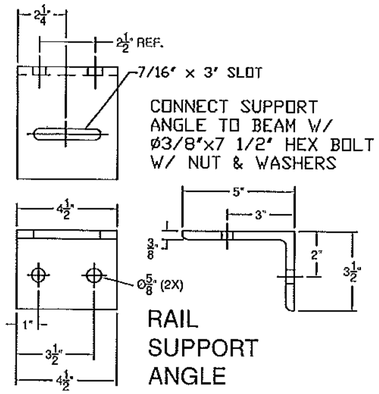








END POST DETAIL



BILL OF MATERIALS - WINGWALL 2			
DET. #	QTY	DESCRIPTION	MATERIAL
1	5	S3x5.7 POST @ 5'-3"	ASTM A36
2	1	S3x5.7 POST @ 3'-8"	ASTM A36
3	1	6"x6"x3/16" BRIDGE RAIL CONNECTOR @ 2'-8 1/4"	ASTM A500 Gr B
4	1	6"x6"x3/16" RAIL @ 19'-6 13/16" W/ TURN DOWN & WELDED END CAP	ASTM A500 Gr B
5	2	5/8"x5 3/8" 2° BRIDGE END SPLICE @ 2'-4"	ASTM A36
6	6	3/8"x3 1/2"x5" SUPPORT ANGLE @ 4 1/2"	ASTM A36
7	4	ø3/4"x2" HEX BOLT & WASHER (SPLICE PLATES)	ASTM A325 & F436
8	6	ø1/2"x1 1/2" HEX BOLT, NUT & WASHER (SUPPORT ANGLE TO POST)	ASTM A325, A563, & F436
9	6	ø3/8"x7 1/2" HEX BOLT, NUT & (2) WASHERS (RAIL TO SUPPORT ANGLE)	ASTM A325, A563, & F436
10	4	ø3/4"x6 1/2" HEX BOLT & FLAT WASHER (RAIL CONNECTOR TO END POST)	ASTM A325 & F436
11	1	DELINEATOR	ALUMINUM

8

BILL OF MATERIALS - WINGWALL 1			
DET. #	QTY	DESCRIPTION	MATERIAL
1	5	S3x5.7 POST @ 5'-3"	ASTM A36
2	1	S3x5.7 POST @ 3'-8"	ASTM A36
3	1	6"x6"x3/16" BRIDGE RAIL CONNECTOR @ 2'-8 1/4"	ASTM A500 Gr B
4	1	6"x6"x3/16" RAIL @ 19'-6 13/16" W/ 40° RAD., TURN DOWN & WELDED END CAP	ASTM A500 Gr B
5	1	5/8"x5 3/8" STRAIGHT BRIDGE END SPLICE @ 2'-4"	ASTM A36
6	6	3/8"x3 1/2"x5" SUPPORT ANGLE @ 4 1/2"	ASTM A36
7	8	ø3/4"x2" HEX BOLT & WASHER (SPLICE PLATES)	ASTM A325 & F436
8	6	ø1/2"x1 1/2" HEX BOLT, NUT & WASHER (SUPPORT ANGLE TO POST)	ASTM A325, A563, & F436
9	6	ø3/8"x7 1/2" HEX BOLT, NUT & (2) WASHERS (RAIL TO SUPPORT ANGLE)	ASTM A325, A563, & F436
10	4	ø3/4"x6 1/2" HEX BOLT & FLAT WASHER (RAIL CONNECTOR TO END POST)	ASTM A325 & F436
11	1	DELINEATOR	ALUMINUM

2

Vermont Agency of Transportation

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CK'D BY David Peterson **OK'D BY** CAM

May 22, 2012

RESUBMIT _____ **APPROVED** AS NOTED

BY C. CARLSON **DATE** 6/1/12

SPECIAL NOTES:

1. INSTALL DELINEATOR EVERY 36 FEET @ SPLICES.
2. SPECIAL PROVISION (BOX BEAM GUARDRAIL, PAINTED) SHALL BE PAINTED BLACK (CHIP COLOR # 27038) (PERTAINS TO 6x6x3/16" BOX BEAM GUARD RAIL ONLY)

ITEM #: 900.640-GUARD RAIL GEN CONTR: F R LaFayette SHEET 1 OF 4

APPROVED BY:

BOX BEAM GUARDRAIL DETAILS

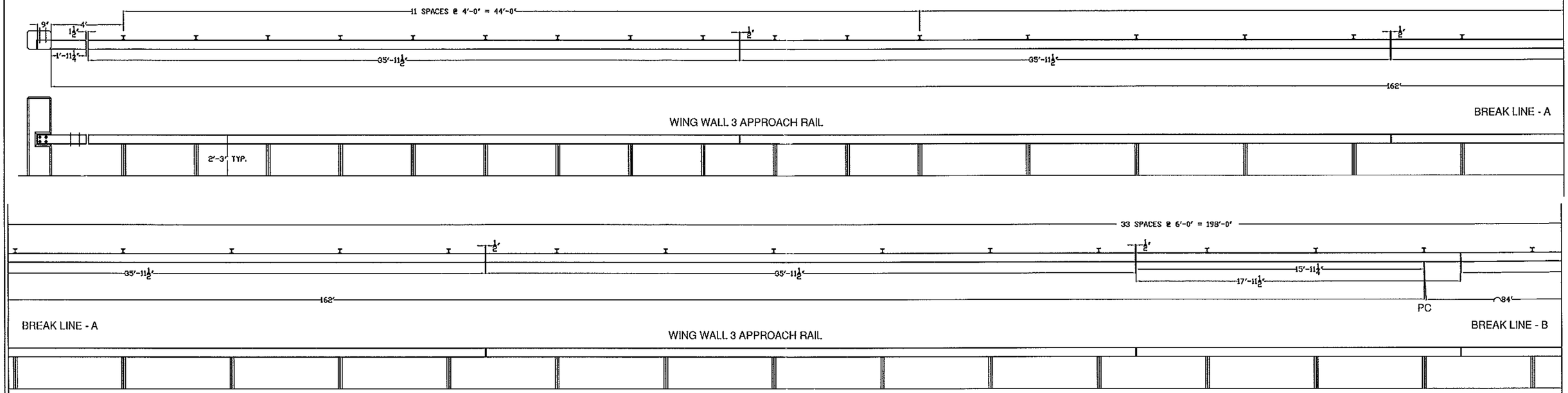
NEWPORT CITY, RAILROAD SQUARE, TH II (CLASS 2) BRO1449 (25), BRIDGE No. 9
COUNTY OF ORLEANS, STATE OF VERMONT

R E V	NO.	DATE	DESCRIPTION	BY	R E V	NO.	DATE	DESCRIPTION	BY

ELDERLEE, INC.
OAKS CORNERS, NEW YORK 14518
E-Mail: dlong@elderlee.com
Tel: 315-789-6670 Fax: 315-789-6615

ACTIVE MEMBER

DRAWN	E.P.	5/4/12
CHECKED	D.L.	5/4/12
APPROVED	M.V.	.
SCALE	SCHEMATIC	
DRAWING NO.	F R LaFayette - Newport City	



Vermont Agency of Transportation

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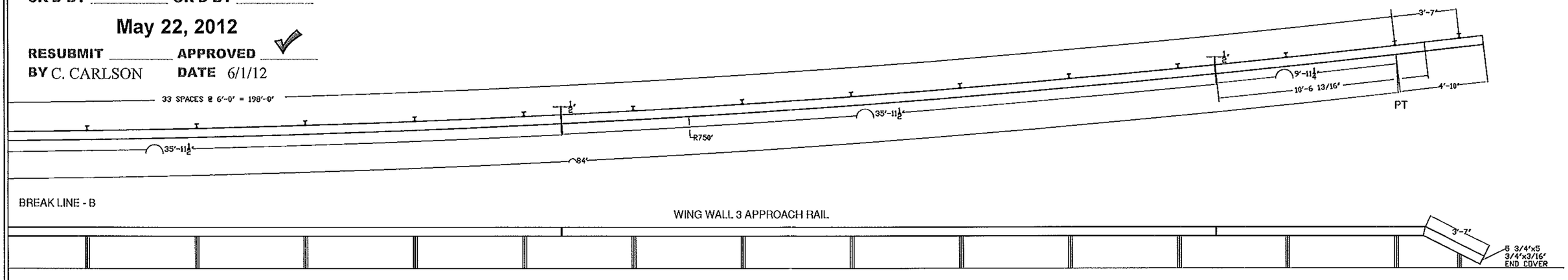
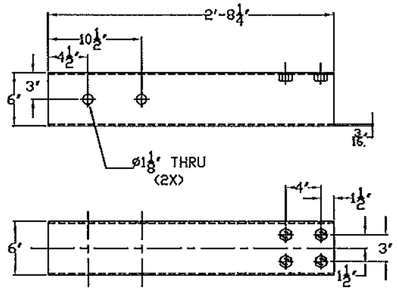
May 22, 2012

RESUBMIT _____ **APPROVED** ✓

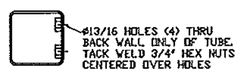
BY C. CARLSON **DATE** 6/1/12



BILL OF MATERIALS - WINGWALL 3			
DET. #	QTY	DESCRIPTION	MATERIAL
1	45	S3x5.7 POST @ 5'-3"	ASTM A36
2	1	S3x5.7 POST @ 3'-8"	ASTM A36
3	1	6"x6"x3/16" BRIDGE RAIL CONNECTOR @ 2'-8 1/4"	ASTM A500 Gr B
4	4	6"x6"x3/16" RAILS @ 35'-11 1/2"	ASTM A500 Gr B
5	1	6"x6"x3/16" RAILS @ 17'-11 1/2" W/ PARTIAL RAD.	ASTM A500 Gr B
6	2	6"x6"x3/16" RAILS @ 35'-11 1/2" W/ 750'-0" RAD.	ASTM A500 Gr B
7	1	6"x6"x3/16" RAIL @ 10'-6 13/16" W/ TURN DOWN & WELDED END CAP	ASTM A500 Gr B
8	2	5/8"x5 3/8" STRAIGHT BRIDGE END SPLICE @ 2'-4"	ASTM A36
9	14	5/8"x5 3/8" STRAIGHT STD. SPLICE @ 2'-3"	ASTM A36
10	46	3/8"x3 1/2"x5" SUPPORT ANGLE @ 4 1/2"	ASTM A36
11	64	ø3/4"x2" HEX BOLT & WASHER (SPLICE PLATES)	ASTM A325 & F436
12	46	ø1/2"x1 1/2" HEX BOLT, NUT & WASHER (SUPPORT ANGLE TO POST)	ASTM A325, A563, & F436
13	46	ø3/8"x7 1/2" HEX BOLT, NUT & (2) WASHERS (RAIL TO SUPPORT ANGLE)	ASTM A325, A563, & F436
14	4	ø3/4"x6 1/2" HEX BOLT & FLAT WASHER (RAIL CONNECTOR TO END POST)	ASTM A325 & F436
15	9	DELINEATORS	ALUMINUM



BRIDGE RAIL CONNECTOR DETAIL



ITEM #: 900.640-GUARD RAIL GEN CONTR: F R LaFayette SHEET 2 OF 4

APPROVED BY:

BOX BEAM GUARDRAIL DETAILS

NEWPORT CITY, RAILROAD SQUARE, TH II (CLASS 2) BRO1449 (25), BRIDGE No. 9
COUNTY OF ORLEANS, STATE OF VERMONT

REV	NO.	DATE	DESCRIPTION	BY

REV	NO.	DATE	DESCRIPTION	BY

ELDERLEE, INC.
OAKS CORNERS, NEW YORK 14518
E-Mail: dlong@elderlee.com
Tel: 315-789-6670 Fax: 315-789-6615

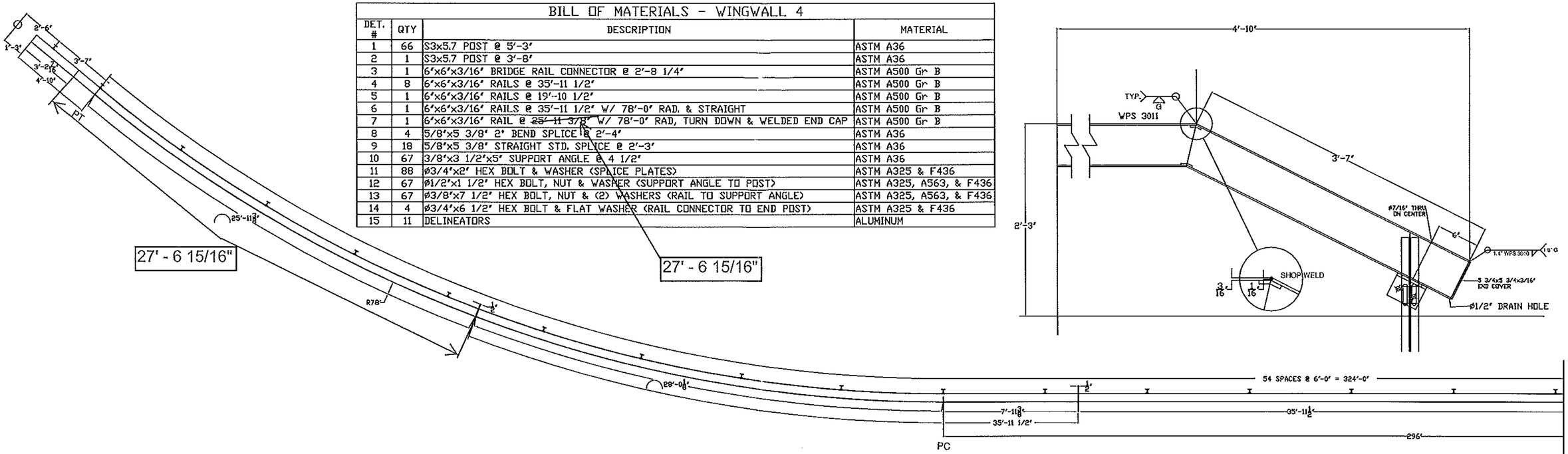
ACTIVE MEMBER

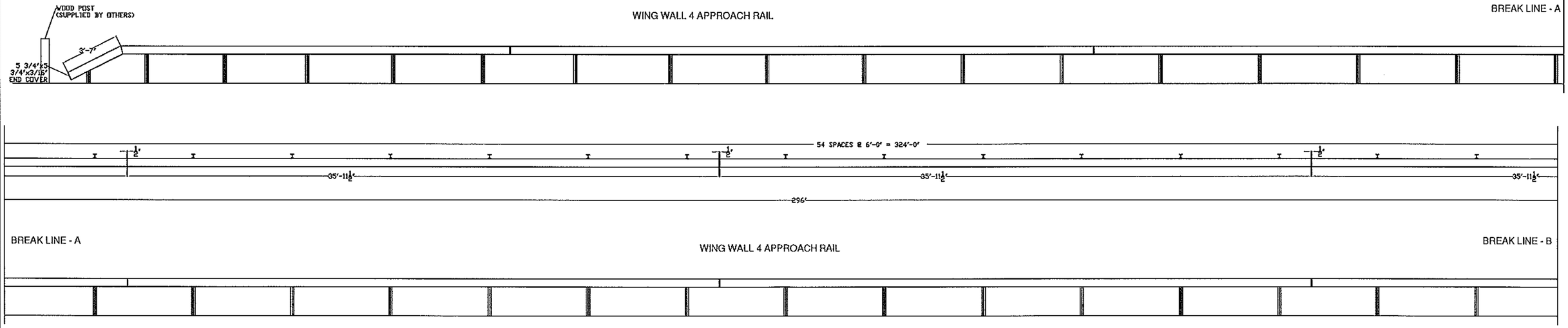
DRAWN	E.P.	5/4/12
CHECKED	D.L.	5/4/12
APPROVED	M.V.	.
SCALE	SCHEMATIC	

DRAWING NO. F R LaFayette - Newport City

BILL OF MATERIALS - WINGWALL 4

DET. #	QTY	DESCRIPTION	MATERIAL
1	66	S3x5.7 POST @ 5'-3"	ASTM A36
2	1	S3x5.7 POST @ 3'-8"	ASTM A36
3	1	6"x6"x3/16" BRIDGE RAIL CONNECTOR @ 2'-8 1/4"	ASTM A500 Gr B
4	8	6"x6"x3/16" RAILS @ 35'-11 1/2"	ASTM A500 Gr B
5	1	6"x6"x3/16" RAILS @ 19'-10 1/2"	ASTM A500 Gr B
6	1	6"x6"x3/16" RAILS @ 35'-11 1/2" W/ 78'-0" RAD. & STRAIGHT	ASTM A500 Gr B
7	1	6"x6"x3/16" RAIL @ ~~25'-11 3/8"~~ W/ 78'-0" RAD, TURN DOWN & WELDED END CAP	ASTM A500 Gr B
8	4	5/8"x5 3/8" 2" BEND SPLICE @ 2'-4"	ASTM A36
9	18	5/8"x5 3/8" STRAIGHT STD. SPLICE @ 2'-3"	ASTM A36
10	67	3/8"x3 1/2"x5" SUPPORT ANGLE @ 4 1/2"	ASTM A36
11	88	Ø3/4"x2" HEX BOLT & WASHER (SPLICE PLATES)	ASTM A325 & F436
12	67	Ø1/2"x1 1/2" HEX BOLT, NUT & WASHER (SUPPORT ANGLE TO POST)	ASTM A325, A563, & F436
13	67	Ø3/8"x7 1/2" HEX BOLT, NUT & (2) WASHERS (RAIL TO SUPPORT ANGLE)	ASTM A325, A563, & F436
14	4	Ø3/4"x6 1/2" HEX BOLT & FLAT WASHER (RAIL CONNECTOR TO END POST)	ASTM A325 & F436
15	11	DELINEATORS	ALUMINUM





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May 22, 2012

RESUBMIT ..... **APPROVED** AS NOTED

BY C. CARLSON **DATE** 6/1/12

ITEM #: 900.640-GUARD RAIL GEN CONTR: F R LaFayette SHEET 3 OF 4

APPROVED BY:

BOX BEAM GUARDRAIL DETAILS

NEWPORT CITY, RAILROAD SQUARE, TH II (CLASS 2) BRO1449 (25), BRIDGE No. 9
COUNTY OF ORLEANS, STATE OF VERMONT

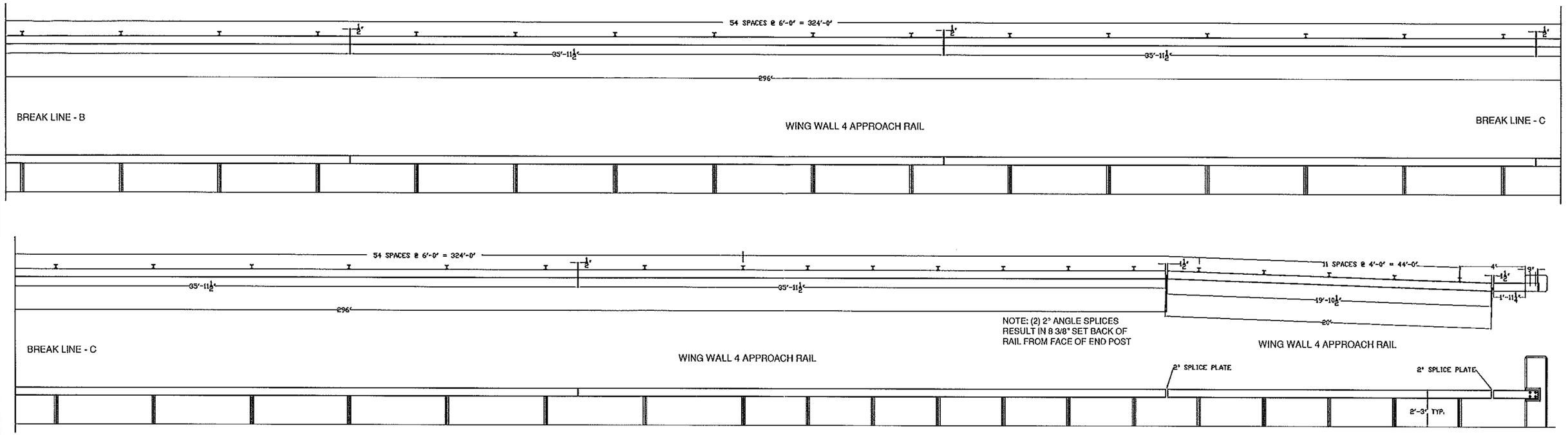
REV	NO.	DATE	DESCRIPTION	BY

REV	NO.	DATE	DESCRIPTION	BY

ELDERLEE, INC.
OAKS CORNERS, NEW YORK 14518
E-Mail: dlong@elderlee.com
Tel: 315-789-6670 Fax: 315-789-6815

ACTIVE MEMBER

DRAWN	E.P.	5/4/12
CHECKED	D.L.	5/4/12
APPROVED	M.V.	.
SCALE	SCHEMATIC	
DRAWING NO.	F R LaFayette - Newport City	



Vermont Agency of Transportation

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CK'D BY David Peterson OK'D BY CAM

May 22, 2012

RESUBMIT _____ APPROVED ✓

BY C. CARLSON DATE 6/1/12

ITEM #: 900.640-GUARD RAIL GEN CONTR: F R LaFayette SHEET 4 OF 4

APPROVED BY:

BOX BEAM GUARDRAIL DETAILS

NEWPORT CITY, RAILROAD SQUARE, TH II (CLASS 2) BRO1449 (25), BRIDGE No. 9
COUNTY OF ORLEANS, STATE OF VERMONT

REV	NO.	DATE	DESCRIPTION	BY

REV	NO.	DATE	DESCRIPTION	BY

ELDERLEE, INC.
OAKS CORNERS, NEW YORK 14518
E-Mail: dlong@elderlee.com
Tel: 315-789-6670 Fax: 315-789-6615

ACTIVE MEMBER

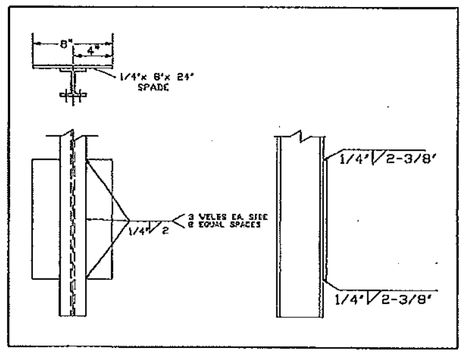
DRAWN	E.P.	5/4/12
CHECKED	D.L.	5/4/12
APPROVED	M.V.	.
SCALE	SCHEMATIC	
DRAWING NO.	F R LaFayette - Newport City	

WELDING PROCEDURE SPECIFICATION

Material Specification	ASTM A36-08
Welding Process	GMAW
Manual or Machine	SEMIAUTOMATIC
Position of Welding	FLAT
Filler Metal Specification	A5.18
Filler Metal Classification	L-56 LINCOLN
Flux	N/A
Shielding Gas	90% ARGON /10% CO2 Dew Point -40DEG F Flow Rate 45CFH
Single or Multiple Pass	SINGLE
Single or Multiple Arc	SINGLE
Welding Current	DC
Polarity	REVERSE
Welding Progression	STRINGER
Root Treatment	PER D1.5
Preheat and Interpass Temperature	PER D1.5
Postheat Temperature	NONE
Heat Input	Min _____ Max _____

WELDING PROCEDURE

Pass no.	Electrode size	Welding Current Amperes	Welding Current Volts	Travel speed	Joint detail
	.045	240	29	13	
Variable	LIMITS	216 TO 264	27 TO 31	14 TO 12	



Vermont Agency of Transportation
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CK'D BY David Peterson OK'D BY JWC
May 22, 2012
RESUBMIT _____ APPROVED ✓
BY C. CARLSON DATE 6/1/12

This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in Section 5.

Procedure No. 3010
Revision No. _____

Contractor Elderlee, Inc.
Authorized By RANDY SCOTT
Date 5/3/2012

Form III-2

Form III-2-Sample Welding Procedure Specification

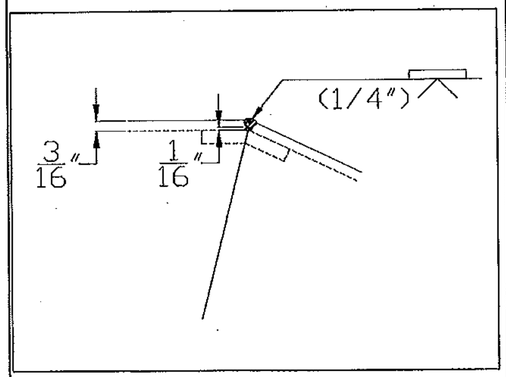
WELDING PROCEDURE SPECIFICATION

Material Specification	ASTM A500 GRD. B A36
Welding Process	FCAW
Manual or Machine	SEMIAUTOMATIC
Position of Welding	FLAT
Filler Metal Specification	A5.20
Filler Metal Classification	E70 LINCOLN OUTERSHEILD
Flux	N/A
Shielding Gas	CO 2 Dew Point -40DEG F Flow Rate 50 CFM (45 TO 63 CFM)
Single or Multiple Pass	SINGLE
Single or Multiple Arc	N/A
Welding Current	DC
Polarity	DCEP
Welding Progression	STRINGER
Root Treatment	PER D1.5
Preheat and Interpass Temperature	PER DI.5
Postheat Temperature	NONE
Heat Input	Min _____ Max _____

WELDING PROCEDURE

Pass no.	Electrode size	Welding Current Amperes	Welding Current Volts	Travel speed
1	3/32	390	27	12
Variable	LIMITS	351 TO 429	25 TO 29	11 TO 13

Joint detail



Vermont Agency of Transportation

RECEIVED

CK'D BY David Peterson **OK'D BY** JWC

May 22, 2012

RESUBMIT _____ **APPROVED** ✓

BY C. CARLSON **DATE** 6/1/12

This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in Section 5.

Procedure No. 3011

Revision No. _____

Contractor Elderlee, Inc.

Authorized By RANDY SCOTT

Date 5/7/2012

VERMONT

State of Vermont
PDD/Structures Design Section
National Life Building -- Drawer 33
Montpelier, VT 05633-5001
www.aot.state.vt.us

Agency of Transportation

[phone] 802-828-2621
[fax] 802-828-3566
[ttd] 800-253-0191

DATE:

Barker Steel LLC
450 US Route 4
Canaan, NH 03741

Project Name: Newport City **Project #:** BRO 1449(25)

Structure Identification: Bridge #9 over the South Bay of Lake Memphremagog

The following **_Item 900.640 "Special Provision (Drilled Shaft in Earth (5 FT to 5 FT–6 IN dia.)" (Reinforcement only)** details and welding procedures for the above project (Vendor's Job #___10046647_____), transmitted and received by our office on February 16, 2012 have been reviewed and are being returned herewith.

Sheets: **R01** **are approved "as noted"** (Upon receipt of these "as noted" plans, please make appropriate changes and submit white prints for our use in the record plans for this project.)

There shall be no fabrication done until all drawings and welding procedures are approved. You must provide notice to our fabrication inspector, Jeff Clark, as to the date fabrication represented by these drawings will begin. That notice must be received and acknowledged at least seven days prior to that date, as per Specification 506.03. Jeff may be contacted by phone at (802)828-0044 or email at jeff.clark@state.vt.us. Any material fabricated prior to the notification date is subject to rejection without further cause.

Sincerely,

for Carolyn W. Carlson, PE
Structures Project Manager

Attachments
cc: [x] Resident Engineer w/prints Chris Craig
[x] Shop Inspector w/prints Jeff Clark
[x] Contractor w/prints Reed & Reed Inc.
[x] Subcontractor – letter only Hub Foundation Co., Inc
[x] Construction Division – letter only
[x] Materials & Research Section (C&IA Unit) – letter only
[x] Files (Structures & Central)

VTrans Working to Get You There
Vermont Agency of Transportation

VERMONT

State of Vermont

Phone 802-828-0048
Fax 802-828-3566
www.aot.state.vt.us

Agency of Transportation
Structures Section
1 National Life Drive
Montpelier, VT 05633-5001

March 9, 2012

Mark Buckbee
Reed & Reed Inc.
P.O. Box 370
Woolwich, ME 04579

Subject: **Newport BRO 1449(25)**
Drilled Shaft Submittal Comments

Dear Mark:

We have completed our review of your Revised Drilled Shaft Submittal by HUB Foundation Company for the Newport BRO 1449(25) project dated February 28, 2012 and we are approving the submittal with the following comments:

1. Polarset will not be used. Temperature of the concrete will be monitored with thermocouples. If there are problems we will address them then.

2. CSL tubes shall be 2" ID.

3. A lifting plan for the rebar cages still needs to be submitted.

4. A steel plate will be placed in the bottom of each casing to dissipate the tremie concrete energy.

5. If the shaft casing needs to be spliced; the welds would fall under D1 certification.

If you have any questions regarding these comments, please do not hesitate to call me at (802) 828-0048.

Sincerely,

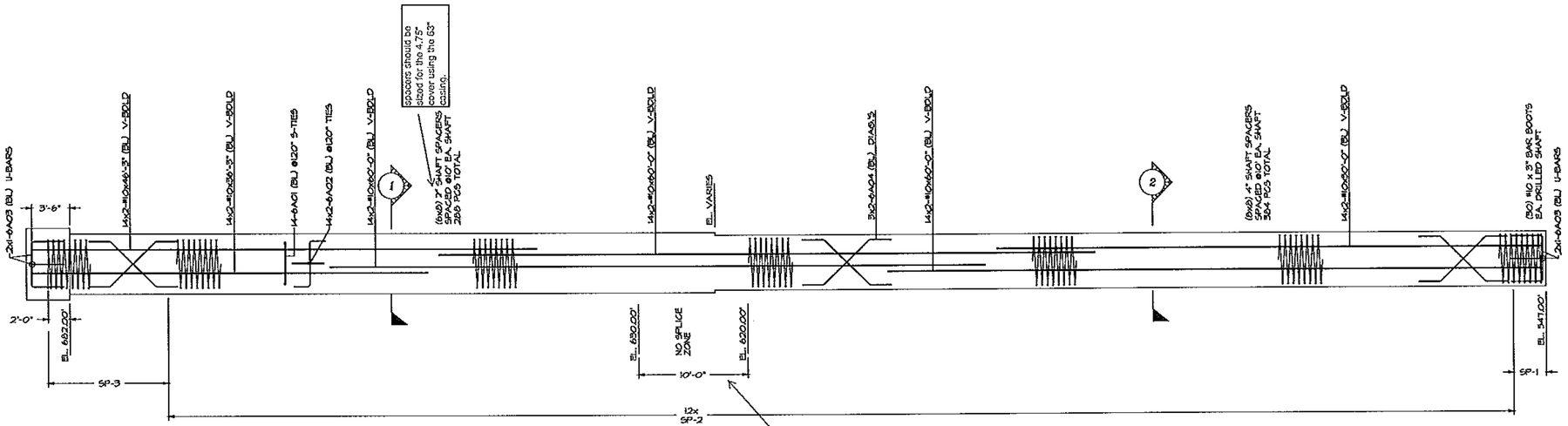
Carolyn Carlson
Project Manager

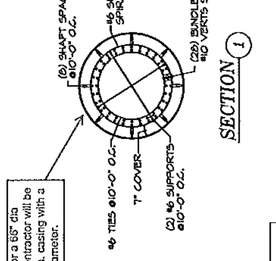
cc: Christopher C. Benda, P.E., Soils and Foundations Engineer
Chris Craig, Resident Engineer
Files

VERMONT

DRILLED SHAFTS @ PIERS

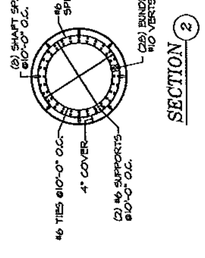
(6) REQUIRED





SECTION 1

This detail is for a 65" dia casing. The contractor will be using a 63" dia. casing with a 61.5" inside diameter.



SECTION 2

SPIRAL SCHEDULE

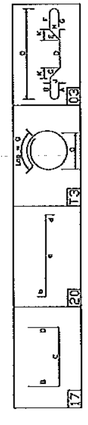
1 1/2 EXTRA TURNS TOP & BOTTOM

MARK	NO. REQD	SIZE	OUTSIDE DIAMETER	HEIGHT	PITCH	COATING
SP-1	6	#6	62"	3'-0"	6"	UNCOATED
SP-2	72	#6	62"	10'-0"	6"	UNCOATED
SP-3	6	#6	62"	11'-0"	6"	UNCOATED

DRILLED SHAFTS BENDING DETAILS

Reference Codes:

Bar Mark	Qty	Bar Weight	A'	B'	C'	D'	E'	F'	G'	H'	J'	K'	X'	Y'	Z'	A'
SA01	6	34 lbs	1'3 1/16"	2"	1'3"	1'-1"	1'-4"	3'-0"	1'-4"	1'-1"	1'3"	3'-0"				3'5"
SA02	72	368 lbs	7'5 7/16"	1'-1"	7'5"											
SA03	6	24 lbs	9'2 5/16"	3'-0"	3'5"										4'7"	6'7"
SA04	6	8 lbs	9'8 3/16"	3'-7"	3'11"										4'7"	6'7"



Vermont Agency of Transportation

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CK'D BY David Peterson OK'D BY CWC

9:02 am, Feb 23, 2012

RESUBMIT _____ APPROVED AS NOTED

BY C. CARLSON DATE 2/24/2012

REFERENCE DWG.

REINFORCING BARS ASTM A615 GRADE 60 UNLESS NOTED
LAP ALL CONTINUOUS BARS 60

#3 =____	#6 =____	#9 =____
#4 =____	#7 =____	#10=5'-0"
#5 =____	#8 =____	#11=____

Legend

IF Inside Face	H	Horizontal
OF Outside Face	EW	Each Way
NF Near Face	B/Bot	Bottom
FF Far Face	T	Top
EF Each Face	SB	Support Bars

NOTICE

Shortages, improper fabrication or claims for any other reason must be reported to this company within a period of 15 days of delivery. This company reserves the right to field inspect prior to replacement or reconditioning of nonconforming material, and will not honor charges for work done in the field without specific authorization from this company.

REINFORCING STEEL PLACING DRAWINGS ONLY USE IN CONJUNCTION WITH CONTRACT DRAWINGS & SPECIFICATIONS. ELEVATIONS & DIMENSIONS SHOWN ON THIS DRAWING ARE FOR DETAILING PURPOSES ONLY AND SHOULD NOT BE USED FOR CONSTRUCTION UNLESS VERIFIED BY ENGINEER OR CONTRACTOR.

DATE	REV. NO.	DESCRIPTION	DATE	SENT FOR
			02/6/12	APPROVAL

BARKER STEEL LLC
a HarrisRebar Company
CANAAN
OFFICE

PROJECT	NEWPORT CITY BRO
	RAILROAD SQ.
LOCATION	NEWPORT VT 05633
ARCHITECT	
ENGINEER	
CUSTOMER	REED & REED INC.

Drawn By	Date	Revised By	Job No.
CPS	02/15/12		10046647

Drawing Covers: DRILLED SHAFTS REINFORCEMENT

Drawing no. R01

Thomas A. Ferri
Certified Welding Inspector 96070911
14 Cherie Lane
Franklin, MA 02038
Telephone (508)789-2040 Fax: (508)528-2678
E-mail taferri@comcast.net

March 27, 2012

Visual inspection of welds performed at Hub Foundation of Chelmsford, MA State of Vermont job in accordance with AWS D.1.1: 2000 Part C acceptance criteria section 6.9 Visual Inspection. All welds found to be acceptable to table 6.1.

Thomas Ferri

WELDING PROCEDURE SPECIFICATION (WPS)

PREQUALIFIED YES ***QUALIFIED BY TEST*** _____

Company Name HUB Foundation
Welding Process(es) SMAW
Supporting PQR # (s) N/A

Identification # SMAW
Revision N/A N/A By N/A
Authorized COMPANY Date 3/23/2012

Type- Manual YES Semi-Auto N/A
Machine N/A Automatic N/A

JOINT DESIGN USED

Single YES B-U2
Backing Yes / No None
Backing Material None
Root Opening and Face Dimension 3/16"
GROVE ANGLE 45 DEG INC.
Back Gouge Y/N/Type Yes grind

POSITION

Position of Groove 3G Fillet N/A
Verticle up Down N/A

ELECTRICAL CHARACTERISTICS

Transfer Mode
Short-Circuiting / Globular / Spray SHORT-CIRCUIT
Current AC, DCEP, DCEN, Pulsed DCEP
Other none

Size 300
Type Miller 302 DC Engine drive

BASE METALS

Material Spec. ASTM A-252 grade 2
Type or Grade carbon steel
Material Thickness 3/4"
Fillet N/A
Pipe Diameter N/A

TECHNIQUE

Stringer or Weave Bead Pass 1-3 STRINGER Pass 4-5 WEAVE
Multi or Single Pass (per side) MULTI ONE SIDE
Number of Electrodes N/A
Electrode Spacing: Longitudinal N/A
Lateral N/A
Angle 45-90
Contact Tube to Work Distance N/A
Peening YES
Interpass Cleaning YES

FILLER METALS

A.W.S. Specification AWS A5.1
A.W.S. Classification E7018

SHIELDING

Flux
Electrode-flux Class N/A
Composition N/A
Flow Rate N/A
GAS CUP N/A

PREHEAT

Preheat Temp., Min. N/A
Interpass Temp. Min. 70 deg
Interpass Temp. Max. 60-350 deg

POSTWELD HEAT TREATMENT

Temp. none
Time N/A

WELDING PROCEDURE

Pass or Weld Layer Layer(s)	Process	FILLER METALS Class	FILLER METALS Diam.	CURRENT Type & Polarity	CURRENT Amps.	Volts	Travel Speed	JOINT DETAIL SEE ATTACHED
#1	SMAW	E7018	0.092	DCEP	68	N/A		
#2	SMAW	E7018	0.125	DCEP	115			
#3	SMAW	E7018	0.125	DCEP	118			
#4	SMAW	E7018	0.125	DCEP	118			
#5	SMAW	E7018	0.125	DCEP	118			
#6								
#7								

WELDING PROCEDURE SPECIFICATION (WPS)

PREQUALIFIED YES ***QUALIFIED BY TEST*** ____

Company Name HUB FOUNDATION
Welding Process(es) SMAW
Supporting PQR # (s) ____

Identification # SMAW
Revision No N/A By N/A
Authorized Hub Foundation Date 3/28/2012

Type- Manual YES Semi-Auto N/A
Machine N/A Automatic N/A

JOINT DESIGN USED

Single YES B-U4a ____
Backing Yes / No YES
Backing Material Mild Steel
Root Opening and Face Dimension 3/8"
GROVE ANGLE 30 deg
Back Gouge Y/N/Type N/A

POSITION

Position of Groove 2G Fillet N/A
Vertical N/A Down N/A

ELECTRICAL CHARACTERISTICS

Transfer Mode
Short-Circuiting / Globular / Spray SPRAY
Current AC, DCEP, DCEN, Pulsed DCEP
Other none

Size 400 amp Engin drive
Type Miller CC/CV

BASE METALS

Material Spec. ASTM A-252
Type or Grade grade 2
Material Thickness 3/4"
Fillet N/A
Pipe Diameter N/A

TECHNIQUE

Stringer or Weave Bead STRINGER
Multi or Single Pass (per side) MULTI
Number of Electrodes N/A
Electrode Spacing: Longitudinal N/A
Lateral N/A
Angle 15-20 deg
Contact Tube to Work Distance ____
Peening YES
Interpass Cleaning YES

FILLER METALS

A.W.S. Specification A5.1
A.W.S. Classification E7018

SHIELDING

Flux ____
Electrode-flux Class N/A
Composition ____
Flow Rate ____
GAS CUP ____

PREHEAT

Preheat Temp., Min. 70 deg
Interpass Temp. Min. 150 deg
Interpass Temp. Max. 60-350 deg

POSTWELD HEAT TREATMENT

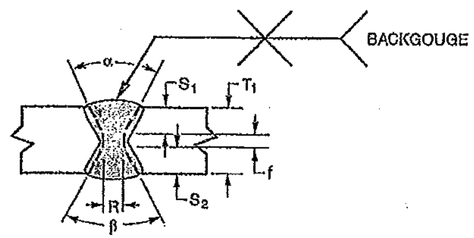
Temp. none
Time N/A

WELDING PROCEDURE

Pass or Weld Layer Layer(s)	Process	FILLER METALS Class	FILLER METALS Diam.	CURRENT Type & Polarity	CURRENT Amps. or W.F.S.	Volts	Travel Speed	JOINT DETAIL
ALL	SMAW	E7018	0.125	DCEP	115	N/A		
#2								
#3								
#4								
#5								
#6								
#7								

See Notes on Page 77

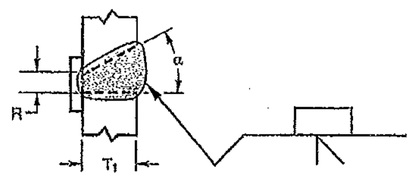
Double-V-groove weld (3)
Butt joint (B)



For B-U3c-S only		
T_1		S_1
Over	to	
2	2-1/2	1-3/8
2-1/2	3	1-3/4
3	3-5/8	2-1/8
3-5/8	4	2-3/8
4	4-3/4	2-3/4
4-3/4	5-1/2	3-1/4
5-1/2	6-1/4	3-3/4
For $T_1 > 6\text{-}1/4$ or $T_1 \leq 2$ $S_1 = 2/3\ (T_1 - 1/4)$		

Welding Process	Joint Designation	Base Metal Thickness (U = unlimited) T_1	Base Metal Thickness (U = unlimited) T_2	Groove Preparation: Root Opening, Root Face, Groove Angle	Groove Preparation: Tolerances As Detailed (see 3.13.1)	Groove Preparation: Tolerances As Fit-Up (see 3.13.1)	Allowed Welding Positions	Gas Shielding for FCAW	Notes
SMAW	B-U3b	U	—	R = 0 to 1/8 f = 0 to 1/8 α = β = 60°	+1/16, –0 +1/16, –0 +10°, –0°	+1/16, –1/8 Not limited +10°, –5°	All	—	d, e, h, j
GMAW FCAW	B-U3-GF	U	—	R = 0 to 1/8 f = 0 to 1/8 α = β = 60°	+1/16, –0 +1/16, –0 +10°, –0°	Not limited Not limited +10°, –5°	All	Not required	a, d, h, j
SAW	B-U3c-S	U	—	R = 0 f = 1/4 min. α = β = 60°	+1/16, –0 +1/4, –0 +10°, –0°	+1/16, –0 +1/4, –0 +10°, –5°	F	—	d, h, j
				To find S_1 see table above; $S_2 = T_1 - (S_1 + f)$					

Single-bevel-groove weld (4)
Butt joint (B)



Tolerances	
As Detailed (see 3.13.1)	As Fit-Up (see 3.13.1)
R = +1/16, –0	+1/4, –1/16
α = +10°, –0°	+10°, –5°

Welding Process	Joint Designation	Base Metal Thickness (U = unlimited) T_1	Base Metal Thickness (U = unlimited) T_2	Groove Preparation: Root Opening	Groove Preparation: Groove Angle	Allowed Welding Positions	Gas Shielding for FCAW	Notes
SMAW	B-U4a	U	—	R = 1/4	α = 45°	All	—	c, e, j
				R = 3/8	α = 30°	All	—	c, e, j
GMAW FCAW	B-U4a-GF	U	—	R = 3/16	α = 30°	All	Required	a, c, j
				R = 1/4	α = 45°	All	Not req.	a, c, j
				R = 3/8	α = 30°	F, H	Not req.	a, c, j
SAW	B-U4a-S	U	—	R = 3/8	α = 30°	F	—	c, j
				R = 1/4	α = 45°			

Figure 3.4 (Continued)—Prequalified CJP Groove Welded Joint Details (see 3.13) (Dimensions in Inches)

Table 6.1
Visual Inspection Acceptance Criteria (see 6.9)

Discontinuity Category and Inspection Criteria	Statically Loaded Nontubular Connections	Cyclically Loaded Nontubular Connections	Tubular Connections (All Loads)
(1) Crack Prohibition Any crack shall be unacceptable, regardless of size or location.	X	X	X
(2) Weld/Base-Metal Fusion Complete fusion shall exist between adjacent layers of weld metal and between weld metal and base metal.	X	X	X
(3) Crater Cross Section All craters shall be filled to provide the specified weld size, except for the ends of intermittent fillet welds outside of their effective length.	X	X	X
(4) Weld Profiles Weld profiles shall be in conformance with 5.24.	X	X	X
(5) Time of Inspection Visual inspection of welds in all steels may begin immediately after the completed welds have cooled to ambient temperature. Acceptance criteria for ASTM A 514, A 517, and A 709 Grade 100 and 100 W steels shall be based on visual inspection performed not less than 48 hours after completion of the weld.	X	X	X
(6) Undersized Welds The size of a fillet weld in any continuous weld may be less than the specified nominal size (L) without correction by the following amounts (U): L, specified nominal weld size, in [mm] / U, allowable decrease from L, in [mm] ≤ 3/16 [5] / ≤ 1/16 [2] 1/4 [6] / ≤ 3/32 [2.5] ≥ 5/16 [8] / ≤ 1/8 [3] In all cases, the undersize portion of the weld shall not exceed 10% of the weld length. On web-to-flange welds on girders, underrun shall be prohibited at the ends for a length equal to twice the width of the flange.	X	X	X
(7) Undercut (A) For material less than 1 in [25 mm] thick, undercut shall not exceed 1/32 in [1 mm], with the following exception: undercut shall not exceed 1/16 in [2 mm] for any accumulated length up to 2 in [50 mm] in any 12 in [300 mm]. For material equal to or greater than 1 in [25 mm] thick, undercut shall not exceed 1/16 in [2 mm] for any length of weld.	X		
(B) In primary members, undercut shall be no more than 0.01 in [0.25 mm] deep when the weld is transverse to tensile stress under any design loading condition. Undercut shall be no more than 1/32 in [1 mm] deep for all other cases.		X	X
(8) Porosity (A) CJP groove welds in butt joints transverse to the direction of computed tensile stress shall have no visible piping porosity. For all other groove welds and for fillet welds, the sum of the visible piping porosity 1/32 in [1 mm] or greater in diameter shall not exceed 3/8 in [10 mm] in any linear inch of weld and shall not exceed 3/4 in [20 mm] in any 12 in [300 mm] length of weld.	X		
(B) The frequency of piping porosity in fillet welds shall not exceed one in each 4 in [100 mm] of weld length and the maximum diameter shall not exceed 3/32 in [2.5 mm]. Exception: for fillet welds connecting stiffeners to web, the sum of the diameters of piping porosity shall not exceed 3/8 in [10 mm] in any linear inch of weld and shall not exceed 3/4 in [20 mm] in any 12 in [300 mm] length of weld.		X	X
(C) CJP groove welds in butt joints transverse to the direction of computed tensile stress shall have no piping porosity. For all other groove welds, the frequency of piping porosity shall not exceed one in 4 in [100 mm] of length and the maximum diameter shall not exceed 3/32 in [2.5 mm].		X	X

Note: An "X" indicates applicability for the connection type; a shaded area indicates non-applicability.

CUC

VERMONT AGENCY OF TRANSPORTATION
MATERIALS && RESEARCH SECTION
CERTIFICATION && INDEPENDENT ASSURANCE UNIT

TYPE "D" RECORD OF CERTIFICATION FROM MANUFACTURER

NAME OF MANUFACTURER: Frichtl Steel & Welding

ADDRESS: 9550 E. State Hwy 33, Newton, Il. 62448

WE HEREBY CERTIFY: **Special Provision (Drilled Shaft in Earth) (5'-0" to 5'-6" DIA.)**

IN THE QUANTITY OF: 360 LF
(Plan Quantity)

FURNISHED BY: Hub Foundation Co., Inc.
(Contractor or Supplier)

FOR USE ON: **0510** **NEWPORT CITY BRO 1449(25)**

IDENTIFIED BY:

CONFORMS TO ALL REQUIREMENTS OF THE STATE OF VERMONT AGENCY OF TRANSPORTATION 2001/2006 STANDARD SPECIFICATIONS, PERTINENT PROJECT PLANS, AND SPECIAL PROVISIONS FOR THE ABOVE STATED CONTRACT FOR ITEM OR ITEMS LISTED AS FOLLOWS: 900.640 AND THAT PROCESSING, PRODUCT TESTING AND INSPECTION CONTROL OF RAW MATERIALS ARE IN CONFORMITY WITH ALL APPLICABLE SPECIFICATIONS, DRAWINGS AND/OR STANDARDS OF ALL MATERIALS FURNISHED.

By: James C Maxwell
Signature of Authorized Representative

Subscribed and sworn to before me

Name: James C. Maxwell
(Type or Print)

Notary [illegible]
Commission Expiring 3-4-16

Title: President
Company Status or Title

CERTIFICATIONS FOR MATERIALS REQUIRING A TYPE "C" OR "D" CERTIFICATION, WHEN SPECIFIED BY CONTRACT PROVISIONS, MUST BE ACCOMPANIED BY MILL TEST REPORTS SHOWING CHEMICAL AND PHYSICAL ANALYSES.

THIS CERTIFICATION IS TO BE COMPLETED BY THE MANUFACTURER OF THE MATERIALS AND NOT BY THE SUPPLIER OR DEALER. THIS CERTIFICATION IS TO BE SENT TO:

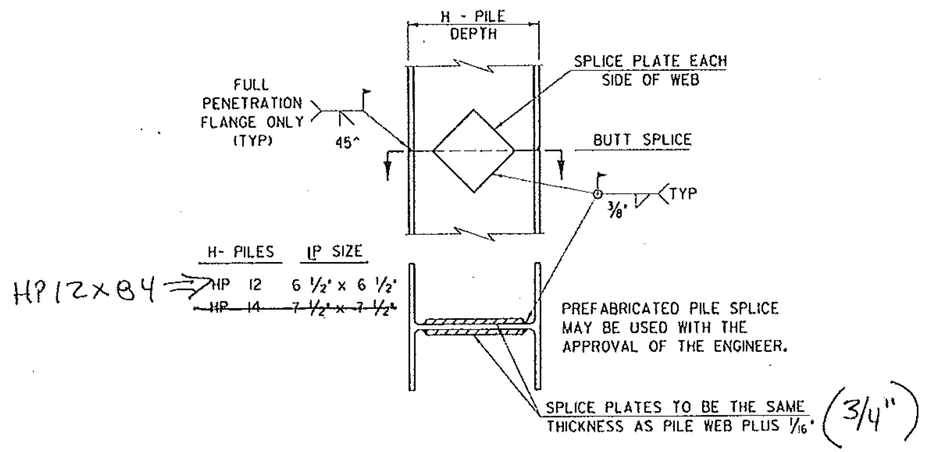
Vermont Agency of Transportation

Materials && Research Section
National Life Bldg. Drawer 33
Montpelier, Vermont 05633

TA 562
Rev 02/03

NEWPORT CITY

7/18/12



DETAIL OF PILE SPLICE

DETAILS ON THIS SHEET ARE 'NOT TO SCALE' UNLESS NOTED OTHERWISE.

VERMONT AGENCY OF TRANSPORTATION · STRUCTURES SECTION ·

STRUCTURES DETAIL

SD-601.00

FULL PENETRATION WELD - FLANGES

WELDING PROCEDURE SPECIFICATION (WPS)

Material specification HP12x84 A572 Gr 50
Welding process SMAW
Manual or machine MANUAL
Position of welding HORIZONTAL
Filler metal specification E7018 AWS A5.1
Filler metal classification E7018
Flux NA
Shielding gas NA Flow rate NA
Single or multiple pass MULTIPLE
Single or multiple arc SINGLE
Welding current BELOW
Polarity DC+
Welding progression NA
Root treatment MANUAL CLEANING
Preheat and interpass temperature 50°F MIN.
Postheat temperature NA
Heat Input Min NA Max NA

WELDING PROCEDURE

Pass No.	Electrode Size	Welding Current Amperes	Welding Current Volts	Travel Speed	Joint Detail
1-6	1/8"	109-120	(70)	—	SINGLE BEVEL GROOVE
			?	WHAT KIND OF POWER SOURCE?	
		OR			
1-6	5/32"	120-140	(70)	—	SINGLE BEVEL GROOVE

This WPS may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in Section 5.

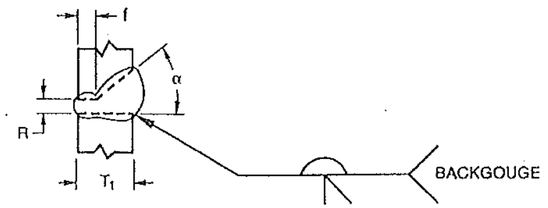
Procedure no. FP1
Revision no. 0
Form III-2

Contractor REED & REED
Authorized By MARK BUCKBEE
Date 7/18/12

Form III-2—Sample Welding Procedure Specification

See Notes on Page 43

Single-bevel-groove weld (4)
Butt joint (B)



Welding Process	Joint Designation	Base Metal Thickness (U = unlimited) T_1	Base Metal Thickness (U = unlimited) T_2	Groove Preparation: Root Opening	Groove Preparation: Tolerances: As Detailed (see 2.12.1)	Groove Preparation: Tolerances: As Fit-Up (see 3.3.4)	Allowed Welding Positions	Gas Shielding for FCAW	Notes
SMAW	B-U4b	U	—	R = 0 to 1/8 f = 0 to 1/8 α = 45°	+1/16, −0 +1/16, −0 +10°, −0°	+1/16, −1/8 Not limited 10°, −5°	F, H	—	1, 3, 9, 13
~~GMAW FCAW~~	~~B-U4b-GF~~	~~U~~	~~—~~				~~H~~	~~Not required~~	~~3, 9~~

Notes for Figures 2.4 and 2.5

Notes:

1. Groove preparations detailed for SMAW joints may be used for GMAW or FCAW.
2. Joint shall be welded from one side only.
3. Backgouge root to sound metal before welding second side.
4. Minimum weld size (E) as shown in Table 2.2; S as specified on drawings.
5. Evidence of CJP shall be required (see 4.7.5).
6. Groove welds in corner and T-joints shall be reinforced with fillet welds with a leg size equal to or greater than T/4, but need not exceed 10 mm [3/8 in.]. T shall be defined as the thinner of the attaching elements.
7. Double-groove welds may have grooves of unequal depth, but the depth of the shallower groove shall be no less than one-fourth of the thickness of the thinner part joined.
8. Double-groove welds may have grooves of unequal depth, provided they conform to the limitations of Note D. Also the weld size (E), less any reduction, applies individually to each groove.
9. The orientation of the two members in the joints may vary from 135° to 180° provided that the basic joint configuration (groove angle, root face, root opening) remains the same and that the design weld size shall be maintained.
10. For corner and T-joints, the member orientation may be changed provided the groove angle shall be maintained as specified.
11. The member orientation may be changed provided that the groove dimensions shall be maintained as specified.
12. The orientation of the two members in the joints may vary from 45° to 135° for corner joints and from 45° to 90° for T-joints, provided that the basic joint configuration (groove angle, root face, root opening) remains the same and that the design weld size shall be maintained.
13. These joint details shall not be used where V-groove or U-groove details are practicable (see 2.14).

Legend for Figures 2.4 and 2.5

Symbols for joint types

B — butt joint
C — corner joint
T — T-joint
BC — butt or corner joint
TC — T- or corner joint
BTC — butt, T-, or corner joint

Symbols for base-metal thickness and penetration

L — limited thickness-CJP
U — unlimited thickness-CJP
P — PJP

Symbol for weld types

1 — square-groove
2 — single-V-groove
3 — double-V-groove
4 — single-bevel-groove
5 — double-bevel-groove
6 — single-U-groove
7 — double-U-groove
8 — single-J-groove
9 — double-J-groove

Symbols for welding processes if not SMAW

S — SAW
G — GMAW
F — FCAW

Welding processes

SMAW — shielded metal arc welding
GMAW — gas metal arc welding
FCAW — flux cored metal arc welding
SAW — submerged arc welding

Welding positions

F — flat
H — horizontal
V — vertical
OH — overhead

Dimensions

R = Root Opening
α, β = Groove Angles
f = Root Face
r = J- or U-groove Radius
S, S_1, S_2 = PJP Groove Weld Depth of Groove
E, E_1, E_2 = PJP Groove Weld Sizes corresponding to S, S_1, S_2, respectively

Joint Designation

The lower case letters, e.g., a, b, c, etc., are used to differentiate between joints that would otherwise have the same joint designation.

FILLET WELD - COVER PLATES

WELDING PROCEDURE SPECIFICATION (WPS)

Material specification HP12X84 A572 GR 50 / 3/4" TK A572 GR 50
Welding process SMAW
Manual or machine MANUAL
Position of welding HORIZONTAL/VERTICAL/OVERHEAD
Filler metal specification ~~E7018~~ AWS A5.1
Filler metal classification E7018
Flux NA
Shielding gas NA Flow rate NA
Single or multiple pass MULTIPLE PASS
Single or multiple arc SINGLE
Welding current BELOW
Polarity DC+
Welding progression NA
Root treatment MANUAL CLEANING
Preheat and interpass temperature NO PREHEAT REQ'D
Postheat temperature NA
Heat Input Min NA Max NA

WELDING PROCEDURE

Pass No.	Electrode Size	Welding Current: Amperes	Welding Current: Volts	Travel Speed	Joint Detail
1-3	1/8"	109-120	70	—	FILLET
			? WHAT KIND OF POWER SOURCE?		
		OR			
1-3	5/32"	120-140	70	—	FILLET

This WPS may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in Section 5.

Procedure no. FW1 Contractor REED & REED
Revision no. 0 Authorized By MARK BUCKBEE
Form III-2 Date 7-18-12

Form III-2—Sample Welding Procedure Specification

VERMONT

State of Vermont
PDD/Structures Design Section
National Life Building -- Drawer 33
Montpelier, VT 05633-5001
www.aot.state.vt.us

[phone] 802-828-2621
[fax] 802-828-3566
[ttd] 800-253-0191

Agency of Transportation

DATE: March 9, 2012

Amscot Structural Products Corp.
241 East Blackwell Street
Dover, NJ 07801

Project Name: Newport City **Project #: BRO 1449(25)**

Structure Identification: Bridge #9 over the South Bay of Lake Memphremagog

The following **Item 531.11 "Bearing Device Assembly, Elastomeric Pad" and Item 531.14 "Bearing Device Assembly, Integral Abutment"** details and welding procedures for the above project (Vendor's Job # BRO 1449(25)), transmitted and received by our office on February 23, 2012 have been reviewed and are being returned herewith.

Sheets: **1 of 2 and 2 of 2** **are approved [X]**

Welding Procedures are also approved.

There shall be no fabrication done until all drawings and welding procedures are approved. You must provide notice to our fabrication inspector, Jeff Clark, as to the date fabrication represented by these drawings will begin. That notice must be received and acknowledged at least seven days prior to that date, as per Specification 506.03. Jeff may be contacted by phone at (802)828-0044 or email at jeff.clark@state.vt.us. Any material fabricated prior to the notification date is subject to rejection without further cause.

Sincerely,

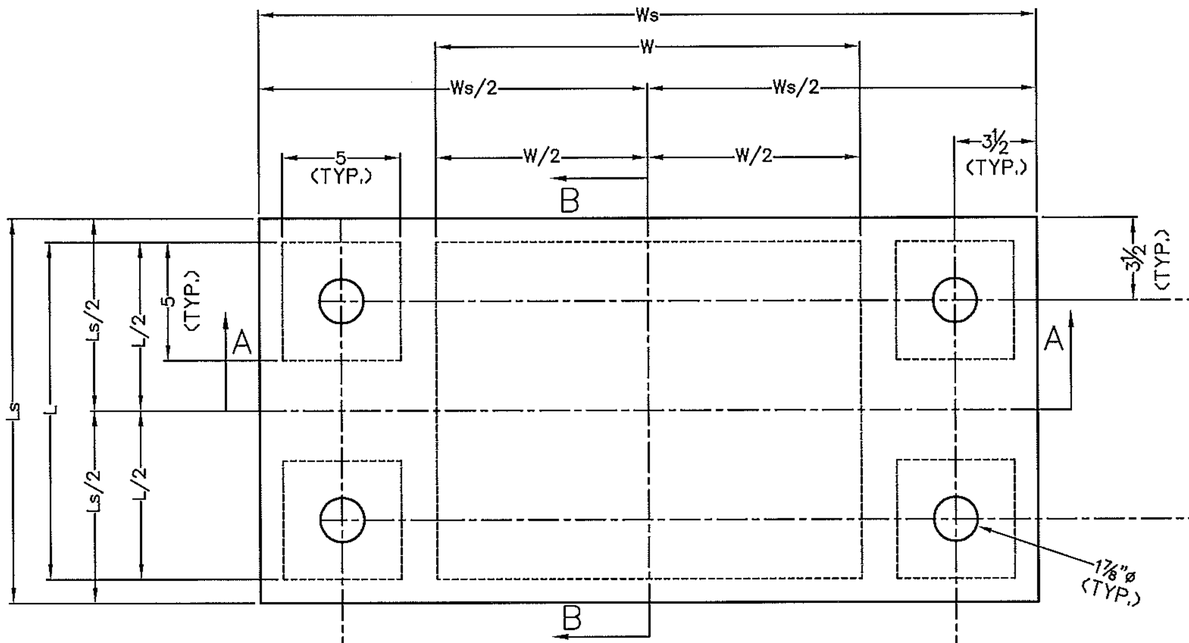
Carolyn W. Carlson

Carolyn W. Carlson, PE
Structures Project Manager

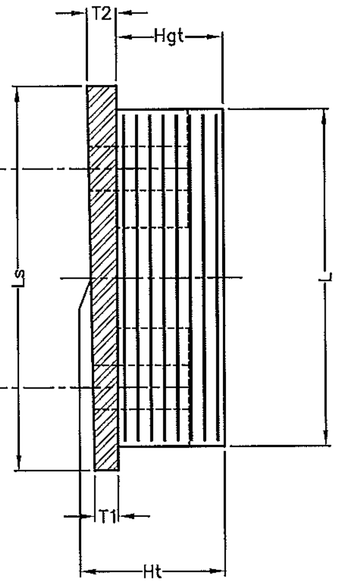
Attachments
cc: [x] Resident Engineer w/prints Chris Craig
[x] Shop Inspector w/prints Jeff Clark
[x] Contractor w/prints Reed & Reed Inc.
[x] Construction Division – letter only
[x] Materials & Research Section (C&IA Unit) – letter only
[x] Files (Structures & Central)

VTrans Working to Get You There
Vermont Agency of Transportation

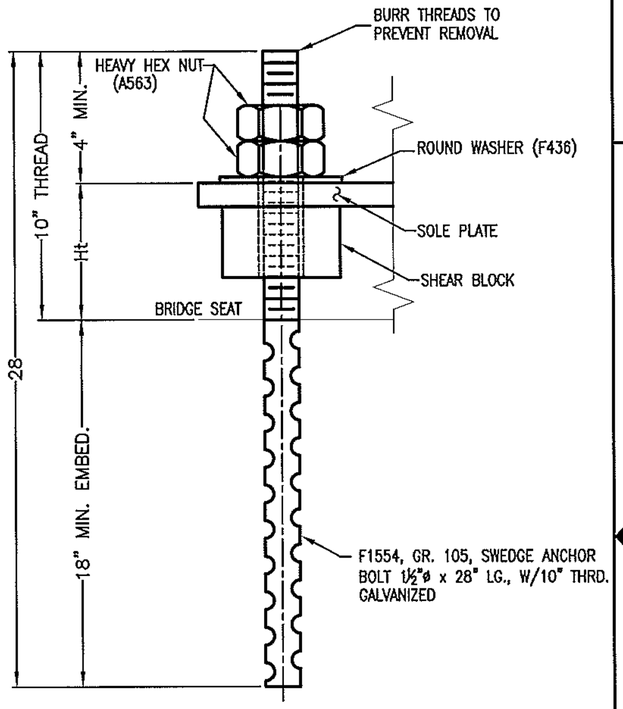
REVISIONS					
ZONE	REV	DESCRIPTION	REVISED BY	DATE	APPROVED



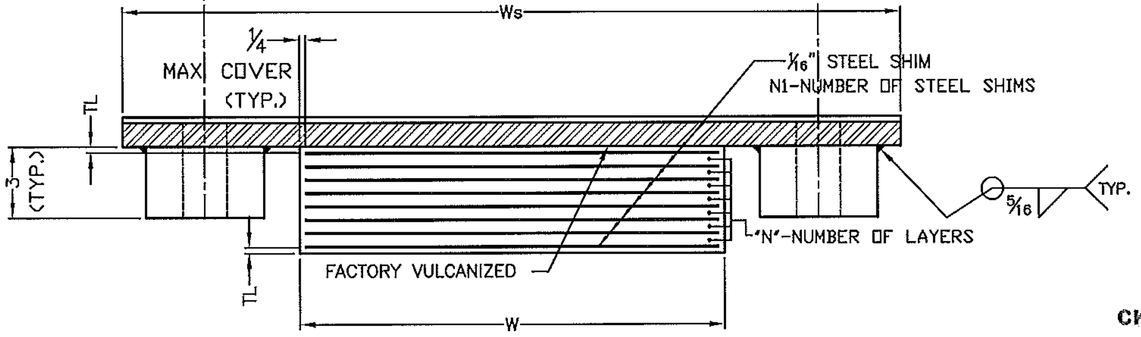
PLAN VIEW



SECTION B–B



ANCHOR BOLT DETAIL
QTY. REQ'D = 40 ASSY.



SECTION A–A

Vermont Agency of Transportation

RECEIVED

CK'D BY David Peterson OK'D BY H. Salls

Jun 27, 2012

RESUBMIT _____ APPROVED ✓

BY C. Carlson DATE 6/27/12

FIXED ELASTOMERIC BEARING (TYPE E.B.) TABLE

LOCATION	QUANTITY REQ'D.	DL+SDL (KIPS)	LL W/O IMP. (KIPS)	TOTAL DESIGN REACTION. (KIPS)	ELASTOMER LAYERS							SOLE PLATE				BEARING Ht
					THK./LAYERS	N/LAYERS	N1	TL	L	W	Hgt.	Ws	Ls	T1	T2	
PIER #1	5	109.6	128.1	237.7	1/2	7	8	1/4	14¼	18	4½	33	16¼	1	1¼	5⅜
PIER #2	5	109.6	128.1	237.7	5/8	5	6	3/8	14½	20½	4¼	35½	16½	1	1	5¼

SEE SHEET 2 OF 2 FOR NOTES

BRIDGE PROJECT
NEWPORT CITY
COUNTY OF ORLEANS

PROJECT NO. : BRO 1449(25)

FIXED ELASTOMERIC BEARING DETAILS
FOR PIER 1 & PIER 2

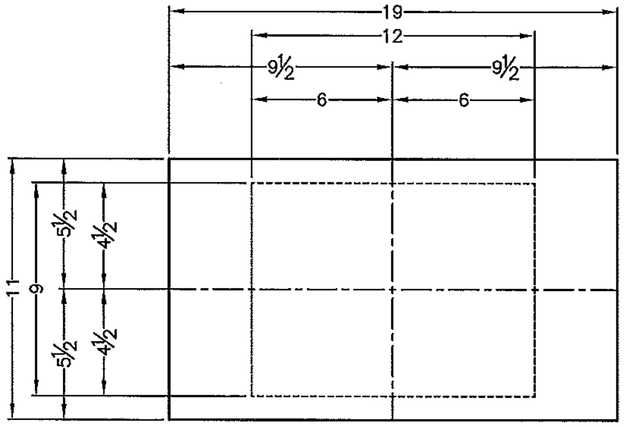
AMSCOT
STRUCTURAL PRODUCTS CORP.

SCALE: N.T.S.	APPRV'D:	DRAWN BY: E.J.C.
DATE: 2/22/12	BF	REVISION: 0

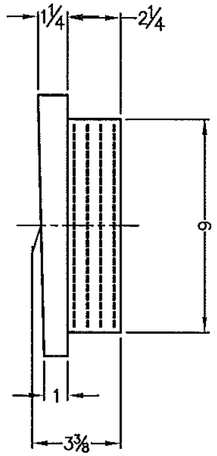
FOR: REED & REED INC.

DWG NO: RR12A1R0 | SHEET 1 OF 2

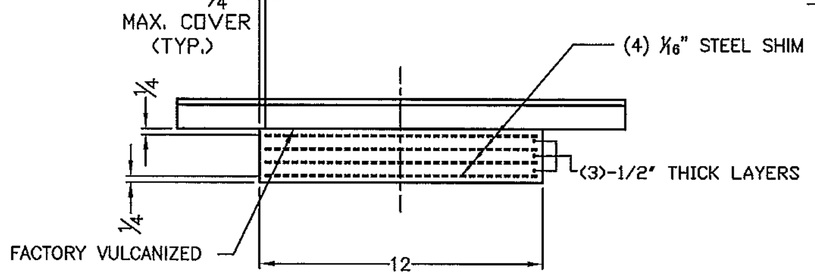
REVISIONS					
ZONE	REV	DESCRIPTION	REVISED BY	DATE	APPROVED



PLAN VIEW



PLAN VIEW



ELEVATION VIEW

QTY. REQ'D. = 10 ASSY.

NOTES FOR LAMINATED ELASTOMERIC BEARING PADS (ITEM NO. 531.11 & 531.14):

1. ALL STEEL BEARINGS SHALL BE AASHTO M270 GRADE 50.
2. ALL DIMENSIONS ARE IN INCHES.
3. BEARINGS TO BE MANUFACTURED ACCORDING TO AASHTO LRFD STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, SECTION 14 & 18, 17th. EDITION, 2002 AND 2010 INTERIMS.
4. ELASTOMERIC NATURAL RUBBER MATERIAL TO BE 50+/-5 DUROMETER HARDNESS, GR. 4.
5. ALL STEEL PRODUCED IN THE U.S.A.
6. THE BEARINGS ARE DESIGNED SO THAT THE SUPERSTRUCTURE MAY BE ERECTED WHEN THE AMBIENT AIR TEMPERATURE IS WITHIN THE RANGE OF 40 DEG. F. TO 90 DEG. F.
7. ALL SWEDGED ANCHOR BOLTS F1554, GR. 105, HH NUTS A-563, AND WASHERS F-436, SHALL BE GALVANIZED
8. ALL BEARING DEVICES SHALL BE GALVANIZED AS PER STANDARD SPECIFICATIONS 506.15 AND 531.04(b), AS MODIFIED BY THE GENERAL SPECIAL PROMSIONS.
9. PRIOR TO GALVANIZING, ALL CORNERS AND EDGES OF STEEL PLATES, SHAPES, ETC. SHALL BE GROUND TO A 1/16" MIN. RADIUS (TYP).
10. THE FIELD WELD CONNECTING THE SOLE PLATE TO THE GIRDER FLANGE SHALL BE ALLOWED TO COOL AFTER EACH PASS, HOWEVER THE TEMPERATURE TO THE STEEL ADJACENT TO THE ELASTOMER SHALL NOT EXCEED 200°F. AS DETERMINED BY THE USE OF INDICATING CRAYONS OR OTHER TEMPERATURE MONITORING DEVICES APPROVED BY THE ENGINEER.
11. MANUFACTURING FACILITY LOCATION: PH: 973-989-8800
    AMSCOT STRUCTURAL PRODUCTS CORP. FAX: 973-989-5651
    241 E. BLACKWELL STREET CONTACT: PETER SOMOGYI COORDINATOR
    DOVER, N.J. 07801
12. STEEL REINFORCED ELASTOMERIC PADS SHALL BE WITHIN THE TOLERANCES LISTED IN TABLE 2 IN AASHTO M251. EXTERNAL LOAD PLATES SHALL BE WITHIN THE TOLERANCES GIVEN IN SECTION 18 OF THE AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS.

Vermont Agency of Transportation
RECEIVED
CK'D BY David Peterson OK'D BY H.Salls
8:47 am, Feb 23, 2012
RESUBMIT _____ APPROVED ✓
BY CWC DATE 2/24/2012

BRIDGE PROJECT
NEWPORT CITY
COUNTY OF ORLEANS

PROJECT NO. : BRO 1449(25)

EXPANSION ELASTOMERIC BEARING DETAILS FOR ABUTMENTS

AMSCOT
STRUCTURAL PRODUCTS CORP.

SCALE: N.T.S.	APPRV'D:	DRAWN BY: E.J.G.
DATE: 2/22/12	BF	REVISION: 0

FOR: REED & REED INC.

DWG NO: RR12A2RO		SHEET 2 OF 2

WELDING PROCEDURE SPECIFICATION ☒
OR
PROCEDURE QUALIFICATION RECORD ☐

Specification No.: 55928

Customer: Reed & Reed Inc. Customer P.O.#: P.O. #2398

Base Metals: M270 Gr.50 P-NO.: 1 Group NO.: 1 to P-NO.: 1 Group NO.: 1

Material Specification Type & Grade: AASHTO M270 Gr.50

Welding Process: F.C.A.W.

Manual or Machine: Manual

Position of Welding: Flat 1-G

Filler Metal Specification: A 5.29

Filler Metal Classification: E-80T1-W, Esab Dual Shield 8100-W

Shielding Gas: CO^2 Rate: 25 CFH

Single or Multiple Pass: Single

Single or Multiple Arc: Single

Welding Current: Direct

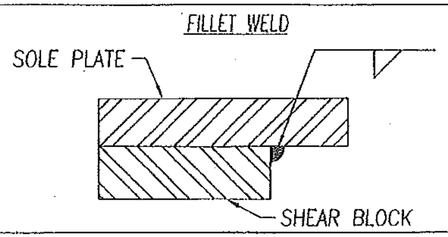
Polarity: Reverse

Root Treatment: Remove all scale, grease, etc. from weld preparation face

Preheat and Interpass Temp: 200 Deg F. to 250 Deg F.

Post weld Heat Treatment: N/A

Pass No.	Electrode Size	Welding Current		Weld Size	Joint Detail
		Amperes	Volts		
1	.06	300-310	30-31	5/16	



Vermont Agency of Transportation
RECEIVED
CK'D BY David Peterson OK'D BY JWC
9:02 am, Feb 23, 2012

RESUBMIT ____ APPROVED ✓
BY DATE 3/9/12

Manufacturer: Amscot Structural Products Authorized By: _____

Date: _____

WELDPRO4.DWG

ARC
Enterprises, Inc.

Advanced Resources & Construction
Enterprises, Inc.
27 Commercial Road
P.O. Box 120
Kingfield, ME 04947
Tele (207) 265-2646
Fax (207) 265-4054
wpkarc@tds.net

NON – CONFORMANCE REPORT

Job name: Newport City

ARC job number: 12-100 **NCR number: 148**

Component / pc. mk. number: 4G1 **Date reported: 9/26/12**

DESCRIPTION OF NON-CONFORMANCE:
On the bottom flange of 4G1 we have drilled the 3rd hole in from left to right ¼" to the right side. Please see attached sketch.

PROPOSED DISPOSITION:
Leave as is.

Report submitted by: Jake Kilbreth, A.R.C. Enterprises, Inc.
Date report was submitted: 9/26/12

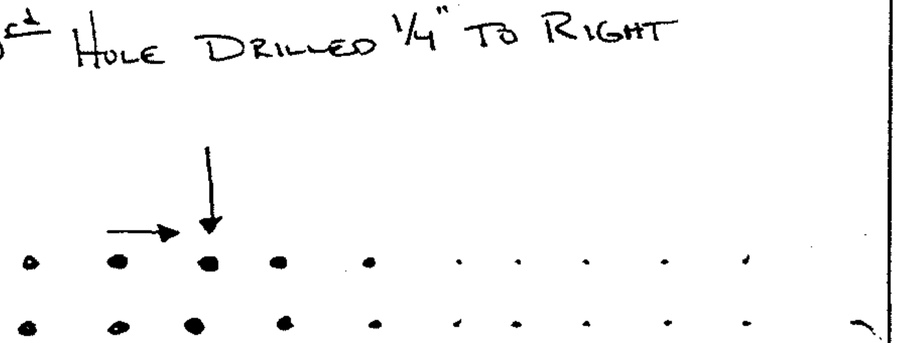
PROPOSED DISPOSITION ACCEPTED [ ] DATE:
PROPOSED DISPOSITION REJECTED [ ] DATE:

DISPOSITION ACCEPTED / REJECTED BY:

_____
Signature and Title

Looking @ Bottom Flange

4G1



Dave-

Canyon check do

to sure we are all set

with leaving this as is?

Simila situation as before. I suspect

that we are fine. TX Carolyn R. & Jeff C. Karen